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1961

QUEENSLAND

ANNUAL REPORT

OF THE

HEALTH AND MEDICAL SERVICES

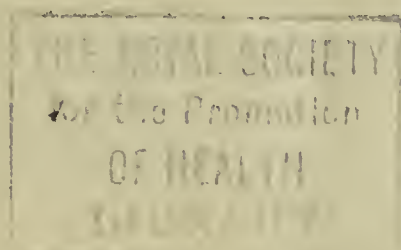
OF THE

STATE OF QUEENSLAND

FOR THE

YEAR 1960-61

PRESENTED TO PARLIAMENT BY COMMAND



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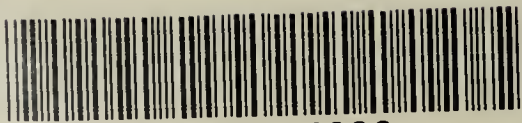
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CONTENTS

	Page
Introductory Remarks and Vital Statistics	3
Division of Public Health Supervision—	
Section of Epidemiology	9
Section of Air Pollution	15
Hansen's Disease	16
Section of Enthetic Diseases	17
Section of Food and Drugs	20
Section of Environmental Sanitation	20
Section of Hookworm Control	22
Division of Tuberculosis	23
Division of Industrial Medicine	29
Division of Maternal and Child Welfare	32
Division of School Health Services	39
Division of Mental Hygiene	42
Division of Welfare and Guidance	59
Alcohol Clinic	62
Division of Laboratory Services—	
Laboratory of Microbiology and Pathology	63
Government Chemical Laboratory	72
Division of Nursing	76
Division of Social Work	78
Flying Surgeon Service	79
Legislation	80

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ANNUAL REPORT OF THE DIRECTOR-GENERAL OF HEALTH AND MEDICAL SERVICES 1960-61

The Honourable the Minister for Health and Home Affairs

SIR,—I have the honour to submit for your information the Annual Report of the Health and Medical Services Branch of the Department of Health and Home Affairs during the year ended 30th June, 1961.

ABRAHAM FRYBERG,

M.B., B.S. (Melb.), D.P.H., D.T.M. (Syd.), Director-General of Health and Medical Services.

STAFF

Mr. H. E. Brown, Technical Supervisor and Senior Bacteriologist of the Laboratory of Microbiology and Pathology, retired after 47 years of meritorious service. Mr. Brown joined the staff of the Laboratory as an assistant and was in charge between 1923 and 1935, no medical officer being available during those years. He inspired his colleagues with his quiet efficiency, energy, and kindliness. To him must go the credit for the Laboratory's functioning so effectively, despite only a small staff, when he was in charge. Since then he has given loyal support to his Director and all officers of the Department will have happy recollections of one whom they all held in great affection.

Mr. S. B. Watkins, Director, Government Chemical Laboratory, Government Analyst, and Chief Inspector of Explosives, retired on 31st December. Mr. Watkins was appointed Deputy Government Analyst in 1941 and Government Analyst and Chief Inspector of Explosives in 1947. To him must go much of the credit for the high standard of work being performed in the Government Chemical Laboratory. Mr. Watkins was esteemed by all associated with him and all wish him well in his retirement. He was succeeded as Director by Mr. I. L. B. Henderson who was previously in charge of the Toxicology Section of the Laboratory.

Miss Bardsley retired as Adviser in Nursing on 31st December. She joined the staff of the Division of Maternal and Child Welfare in 1924, was appointed Superintendent of that Division in 1937 and the first Adviser in Nursing in 1953. She took an active interest in nurses' affairs and held many offices in the Royal Australian Nursing Federation which she represented on three occasions overseas. She was appointed a member of the Nurses and Masseurs' Registration Board in 1955. She gave wonderful service to the cause of nursing and endeared herself to the whole nursing profession. She was succeeded by Mrs. E. W. S. Sullivan.

Dr. P. R. Patrick was successful in obtaining the Diploma in Public Health and returned to duty on 28th November, 1960.

Dr. E. W. Abrahams was granted indefinite sick leave on 1st March, 1961, and Dr. C. Evans was appointed Acting Director of Tuberculosis in his absence.

Appointments

Dr. P. Livingstone who was appointed Director of Geriatrics in June was registrar at the Chronic Section of the Princess Alexandra Hospital prior to his departure overseas. He obtained his geriatric training under the direction of the late Dr. Marjory Warren. Dr. Livingstone was the first doctor to obtain the M.R.C.P. (Edin.) with geriatrics as the major subject.

Dr. L. K. Manning was appointed Chest Physician, Rockhampton.

Dr. John Edwards was appointed Medical Officer, Chest Clinic, Brisbane.

Drs. I. Apel, J. N. Trout, S. Gottlieb, and W. P. Hurley were appointed to the Brisbane Mental Hospital.

Dr. G. M. S. May was appointed Medical Officer, School Health Services.

Dr. I. W. W. Charles was appointed Medical Director, Welfare and Guidance Clinics.

Dr. W. W. Biggs, a Fellowship holder, was appointed anaesthetist to the Flying Surgeon in the place of Dr. T. P. Thomas.

Resignations

Dr. V. M. O'Hara resigned from the staff of School Health Services.

COMMUNICABLE DISEASES

There were no major epidemics during the year. There was a decrease in notifications in most diseases but there was an increase of two in diphtheria. Twenty-nine notifications were received for poliomyelitis but a large percentage of these will be found to be negative.

Diphtheria

Eight notifications were received. Two were for the Greater Brisbane area: the first for two years. Both were children, aged two and three years respectively, and each had received only one injection of diphtheria toxoid. One of the children died. The rate of immunisation in the Brisbane area is 91 per cent. Active immunisation is the only method of preventing diphtheria and this is available free of charge to any child in Queensland through the Local Authority. It is appreciated that some children living in isolated areas might have their immunisation delayed but all children should be immunised as soon after the age of three months as possible to prevent needless loss of infant life. Local Authorities are to be commended on the immunisation campaigns which they carry out. It is the responsibility of parents to see they avail themselves of the opportunity to have their children immunised.

Six notifications were received from the extra-metropolitan area, three of which were for children under the age of twelve. None of these children had been immunised. One, a baby of fifteen months, died.

Infective Hepatitis

There was an increase in the notifications received from 740 in the 1959-60 period to 855 this year. Most cases occurred in the country. (Tables VII. and VIII. refer.) The only preventive measure which can be practised is personal hygiene.

Poliomyelitis

Twenty-nine notifications of poliomyelitis or suspected poliomyelitis were received. Of this number, thirteen have been proven positive, seven negative, two doubtful, and the results of specimens submitted from the remaining seven are awaited.

Of the thirteen patients reported as positive, eleven had not received any injections with Salk vaccine; one had received one injection; and the remaining patient had been fully immunised.

Of the proven cases, nine could have been fully immunised when Salk vaccine was available for all age groups but did not avail themselves of the opportunity to do so while the other two patients had ample opportunity to have two injections before Salk vaccine became unavailable.

Ample supplies of vaccine were available until December, 1960, yet despite pleas by the Department to parents to have themselves and their children immunised, a percentage failed to take the opportunity to have this done. Yet when a sporadic case occurred there was panic and telegrams were sent to the Department, and the Commonwealth Serum Laboratories were criticised when the supplies of vaccine failed. Parents themselves were to blame for not taking the opportunity to have themselves and their children immunised when vaccine was available and they must accept the responsibility if they or their children develop poliomyelitis.

I hope that when vaccine does become freely available again the Departmental publicity urging vaccination against this dread disease will be heeded.

VITAL STATISTICS

The expectation of life increased from 54.2 years for males and 59.3 for females in 1910, to 67.14 for males and 72.75 for females. During this period the birth rate decreased from 27.3 in 1910 to 24.1. The result has been an increase in the proportion of persons over the age of 65 years in the community with less people to provide for them.

In 1910, the over 65 years age group comprised 3.7 per cent. of the population while the work force, that is the people available for work was 44.0 per cent. The percentage of persons over 65 years as at 30th June, 1960, was 8.4 per cent. of the population with a percentage work force of 40 per cent. Immigration since the war has improved the position for the present as most immigrants have been in the younger age groups but the position will worsen at some future time if immigration ceases.

The question which arises is whether such a small work force can provide for an increasing old age group. A Government of the future will have to determine whether a person who is physically and mentally fit should be retired at a retiring age of 65.

As in previous years, diseases of the heart and circulatory system were the leading cause of death with cancer as the second principal cause. This is understandable as communicable diseases as a cause of morbidity and mortality are now becoming medical curiosities, and these principal causes are diseases of the old age group whose numbers are increasing.

The infant mortality rate increased from 20.3 to 21.0 per thousand live births while the maternal mortality rate increased from 0.59 to 0.68 per thousand live births. Of the 740 babies under the age of one year who died, 224 deaths (18.3 per 1,000 live births) occurred in the metropolitan area, 212 (22.4) in the sub-tropical part of the State excluding the metropolitan area, and 204 (22.5) occurred in tropical Queensland. No reason is apparent for these differences, and investigations will be carried out in the coming year to ascertain why there should be a variation in the infant mortality rate in these regions.

SECTION OF ENTHERIC DISEASES

The trend of the incidence of venereal disease throughout the world shows an increase in prevalence. Queensland has followed the world pattern. One thousand two hundred and two notifications of gonorrhoea were received, an increase of 430 over the previous year. There was a decrease in notifications for syphilis from 129 last year to 98.

The factors responsible for the increase are unknown. The resistance of some strains of gonococcus to penicillin might account in part for the increase in gonorrhoea. One of the main reasons for the increased notifications is the increase of venereal disease in the 16-20 years age group. Five hundred and eleven notifications (430 males and 81 females) were received this year as against 237 (198 males, 39 females) last year. Parents must accept the blame for the lack of discipline and unsatisfactory home life which have resulted in increased promiscuity and therefore venereal disease amongst this age group.

DIVISION OF TUBERCULOSIS

As I mentioned last year the best way of controlling tuberculosis is to find the "missed" case as early as possible as it acts as a focus of infection from which spread takes place. It was for this reason that X-ray by the Micro-X-ray units was made compulsory in November, 1959. It would be expected that there would be an increase in notifications of pulmonary tuberculosis for the year 1959-60, over the previous year and an increase in the past year over 1959-60, because of the increased number of persons X-rayed. The notifications were as follows:—

Year	No. of Micro-films	Notifications of Pulmonary Tuberculosis		
		Metro-politan	Country	Total
1957-58	91,225	383	425	808
1958-59	100,495	343	392	735
1959-60	223,796	289	452	741
1960-61	248,183	283	442	725

It will be seen that despite the increase in micro films taken there was a decrease in the number of cases reported.

The rate of positive cases found in Cairns was 4.27 per thousand films as against 2.25 in Townsville.

In my report of 1957-58, I referred to the high percentage rate of tuberculin positive reactions in children of school leaving age. The percentage rate in Cairns was 72.1 and in Townsville 44.2. I stated in that report "This implies a high incidence of tuberculosis in the community as these children must have been exposed to an open case. It is, therefore, necessary to prove or disprove this by seeing every adult of the community is X-rayed."

A survey of the people of the Cairns area was carried out by the mobile X-ray unit on a voluntary basis in 1954-55 and 1 per 1,000 persons was found to have active tuberculosis. This low figure suggested that the infection could have been caused by an atypical mycobacterium related to that causing tuberculosis which could produce a positive tuberculin reaction and the problem was referred to the Queensland Institute of Medical Research for investigation.

It would appear from the high rate of active cases diagnosed following the compulsory mass X-ray survey that the cause of the high tuberculin rate in the Cairns children could be due in part to the high incidence of tuberculosis in adults in that region. Investigations will continue.

The compulsory X-ray survey was responsible for 40 cases of cancer of the lung being found. A mass X-ray survey is the best method of detecting this condition in the present state of our knowledge.

DIVISION OF MATERNAL AND CHILD WELFARE

In my last report I expressed concern at the number of maternal deaths which increased from 0.47 (16 deaths) in 1958 to 0.59 (21 deaths) per 1,000 live births in 1959. The maternal mortality rate has increased to 0.68 (24 deaths) which is higher than the Australian rate of 0.53. This is a matter for continued concern and the expert committee which was formed during the year to investigate these deaths will endeavour to ascertain whether any were avoidable.

There was an increase in the number of attendances at the clinics from 478,086 in 1959-60, to a record attendance of 494,215.

Two investigations were carried out during the year which have proved the value of the Maternal and Child Welfare Centres in the prevention of disease. The Centre attendance of 32 patients suffering sub-clinical scurvy which was reported from the Brisbane Children's Hospital was reviewed. Twenty-three children had not attended the Maternal and Child Welfare Centres; the attendances of two were doubtful; and one came from New South Wales. Of the remaining six, five were artificially fed and when they did attend were immediately ordered the necessary treatment. Babies attending the Centres are ordered orange juice at four weeks as a prophylactic measure against scurvy.

The second investigation was prompted by a statement made by Dr. P. A. Earnshaw in his presidential address to members of the British Medical Association. He quoted from a letter he received from a nurse who wrote, *inter alia*, "Many doctors have considerable responsibility for the decline in breast feeding, not so much because they deliberately wean the babies but because they will not help the mothers to

persevere . . . When the Child Welfare Service was established . . . over thirty years ago . . . the Service attracted the more dedicated type of nurse who regarded her efforts to improve infant feeding and encourage breast feeding almost in the light of a crusade." Dr. Earnshaw then expressed his belief that "This nurse's opinion correctly describes the position today. Many of the infant welfare nurses have not the enthusiasm or the resolution to persist in their efforts to succeed in maintaining breast feeding." Dr. Earnshaw did not support his opinion by statistics nor did the nurse's statement support his contention. The nurses of the Maternal and Child Welfare Service have always been proud of the fact they have continued to follow the teachings of that grand old man, the late Dr. Jefferis Turner, in regard to breast feeding. A review of the admissions to three metropolitan centres over a period of twelve months shows that of 2,455 babies who were fully breast fed on admission, 1,450 were still being breast fed at the end of three months, 354 had been weaned by doctors, 298 had been weaned by their mothers, 256 ceased breast feeding owing to failure of supply, 23 only were weaned by Clinic Sisters while the remaining 74 ceased to attend. Whoever was responsible for the failure to help the mothers to persevere with breast feeding, it was certainly not the "infant welfare nurses" of the Maternal and Child Welfare Service.

An assessment of the weight gain of 123,780 babies in the first year of life was made. It was found that there was no significant difference in the rate of growth of babies living in the metropolitan, sub-tropical, and tropical regions.

DIVISION OF SCHOOL HEALTH SERVICES

In his Annual Report of 1907, Dr. Burnett Ham, then Commissioner of Public Health, advocated school medical examinations because "the future of a people depends on the upbringing of the children." No action was taken until January, 1911, when medical and dental examinations were commenced and in his Annual Report of that year Dr. Elkington wrote "The results have shown its practical value, both from the educational standpoint and from that of the public health." This was the first of the personal health services in Queensland.

It should be noted the most common defects found are defective hearing and vision. This is most important as many children suffering from unrecognised deafness and defective vision have been diagnosed as mental defectives when in fact all they need is to be brought to the front of the room.

The School Dental Service is another example of the service given to the people living in isolated areas of the State. Four dental rail cars, fully equipped, give treatment to school children living on the railway line. Those living off the line are given treatment by the dentist who, using portable equipment, visits the school in the motor car which accompanies him on the train. These dentists work cheerfully under difficult conditions and they are to be commended for the service they have given to the children of Queensland.

Fluoridation of the Biloela water supply was approved by the Banana Shire Council, the first in Queensland to take this action, as a step in the prevention of dental caries. It has never been claimed that dental caries will be wholly eliminated by fluoridation—diet is also important—but it will reduce its incidence and severity, allowing conservative treatment to be carried out.

The usual flood of misleading pamphlets were distributed at Biloela but it must be remembered that misguided persons opposed the introduction of medical advances such as the use of chloroform, immunisation, and chlorination of water.

DIVISION OF MENTAL HYGIENE

No greater advance has been made in any section of the Health and Medical Services than that made in the Division of Mental Hygiene. It has been realised that the restrictions used in the past to control patients were unnecessary. With the introduction of the "open" ward system, patients lost their aggressive or frightened attitude and co-operated in their treatment, and the introduction of tranquillising and stimulating drugs made treatment more effective.

A survey of mental hospitals in 1954 showed that overcrowding was due to the large number of senile patients who had been admitted to mental hospitals because there was no other institution to accommodate them. Senile annexes were attached to general hospitals and the senile patients whose only reason for admission to the mental hospital was cerebral degeneration due to old age were transferred there.

On the return of the Director of Mental Hygiene from overseas in 1959, approval was given to his plan for the integration of the psychiatric services in the State. The general hospital was to become the centre for early treatment which was so effective and rapid that it was often only a matter of weeks until the patient could be transferred to outpatients. It was realised that if a longer stay in hospital were required the patient must be transferred to another institution and as the mental hospitals were the only institutions available the patient after certification was transferred there. To overcome this, approval was given for the building of a neuropsychiatric hospital at Chermside where these patients could be accommodated for a period of six to nine months. There would still be the type of patient who required custodial care and he would be treated in the mental hospitals.

Psychiatric clinics have been established in Brisbane, Ipswich, Toowoomba, and Townsville, and these will be extended to other country centres as psychiatrists become available.

DIVISION OF LABORATORY SERVICES

LABORATORY OF MICROBIOLOGY AND PATHOLOGY

The work done by this Laboratory continues to increase, over 260,000 tests—22,000 more than in the previous year—being carried out.

The Laboratory continues to take an active interest in Q fever in co-operation with the Queensland Institute of Medical Research. It should be remembered it was here that Dr. E. H. Derrick, when Director, discovered this disease and it is fitting the Laboratory should work with the Queensland Institute of Medical Research where Dr. Derrick is now Director.

The investigations into leptospirosis have received praise from overseas and the Laboratory is now recognised as the Leptospiral Reference Laboratory for Australasia.

Of particular interest was the survey carried out into wound infection at the Princess Alexandra Hospital which resulted in a reduction in the infection rate.

It is pleasing to report that the Institute of Forensic Pathology was opened during the year.

GOVERNMENT CHEMICAL LABORATORY

The services performed by the Laboratories under the direction of the Government Analyst and Chief Inspector of Explosives continue to expand and to carry out chemical analyses required by Government Departments (both Commonwealth and State) as well as for the public. A record total of 27,553 samples, an increase of 3,267, were examined during the year.

FLYING SURGEON SERVICE

It has always been the policy of the Department to bring security in health to the people living in the sparsely populated areas of the State. Fellowships are given to students to study medicine and dentistry on the understanding they will serve in any part of the State to which they might be directed. These fellowship-holders generally have honoured their obligations when directed to hospitals in isolated country areas and have given excellent service to the people living in the western part of the State. The Rail Dental Clinics bring a dental service to the people living in towns on and off the railway line. The nurses of the Maternal and Child Welfare Service, through its Clinics and Rail Clinic Car, give advice to mothers in regard to ante-natal treatment and infant feeding. The doctors of the Royal Australian Flying Doctor Service are available to give medical assistance while the Flying Surgeon is available for emergency and other operations which are outside the scope of his less experienced colleagues.

The Flying Surgeon was appointed two years ago and has been responsible for the saving of many lives. He not only answers emergency calls but makes routine visits to one doctor towns for consultations and medical discussions with the doctor. The provision of a twin-engined machine during the year has enabled the area visited by him to be extended to Roma.

VITAL STATISTICS

Population

The estimated population of Queensland at 31st December, 1960, was 1,466,879, an increase of 19,681 (or 1.4 per cent.) for the year. The estimated population living in the Greater Brisbane area was 581,500, an increase of 10,500 (or 1.8 per cent.) during 1960.

The population density per square mile is 2.20 persons for the whole of Queensland, 1,510 persons in the greater Brisbane area, and 1.33 persons for the rest of the State; 39.6 of the population of the State reside in the metropolitan area.

TABLE I

SHOWING POPULATION OF AUSTRALIAN STATES AND THE PERCENTAGE OF ESTIMATED AUSTRALIAN POPULATION RESIDENT IN EACH STATE DURING CERTAIN YEARS (AT 31ST DECEMBER), SINCE 1935

Year	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania		Australian Capital Territory	Australia
	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Per Cent.	Number	Number
1935	2,658,672	39.3	1,841,595	27.3	971,297	14.4	586,762	8.4	449,623	6.6	233,623	3.5	14,890	6,755,662
1940	2,790,948	39.4	1,914,918	27.1	1,031,452	14.6	599,056	8.4	474,076	6.7	244,002	3.5	23,134	7,077,586
1945	2,932,998	39.5	2,015,107	27.1	1,084,864	14.6	630,882	8.5	490,088	6.6	250,280	3.4	25,978	7,430,197
1950	3,241,057	39.0	2,237,182	28.1	1,205,418	14.5	722,843	8.7	572,649	6.9	290,333	3.5	37,999	8,307,481
1955	3,525,923	37.9	2,555,021	27.4	1,350,684	14.5	834,635	9.0	670,750	7.2	325,801	3.5	40,477	9,313,291
1958	3,725,686	37.4	2,770,919	27.8	1,424,818	14.3	907,992	9.1	713,583	7.2	346,545	3.5	62,075	9,951,618
1959	3,790,270	37.3	2,842,903	28.0	1,447,198	14.2	934,427	9.2	726,489	7.1	354,582	3.5	70,304	10,166,173
1960	3,872,809	37.3	2,925,533	28.1	1,466,879	14.1	956,939	9.2	740,245	7.1	359,789	3.5	75,976	10,398,170

Births

During 1960, births registered in Queensland totalled 35,213, a decrease of 386 on the previous year, which was the highest number on record. The crude birth rate was 24.1, compared with 24.8 in 1959. The births comprised 18,164 males and 17,049 females, giving a masculinity rate of 106.5.

The natural increase (excess of births over deaths) was 22,843, being equal to an increase of 1.6 per cent. of the population.

The birth rate in Queensland remains relatively high, and the rate of natural increase in very satisfactory.

TABLE II
CRUDE BIRTH RATE (PER 1,000 POPULATION)

	1955	1956	1957	1958	1959	1960
Commonwealth of Australia	22.6	22.5	22.9	22.6	22.6	22.4
Queensland	24.2	23.7	24.2	23.9	24.8	24.1
New South Wales ..	21.3	21.3	21.9	21.7	22.5	21.4
Victoria	22.3	22.4	22.6	22.4	22.1	22.1
South Australia ..	22.5	22.3	22.3	22.4	22.1	22.2
Western Australia ..	25.2	25.0	24.5	23.7	23.8	23.1
Tasmania	25.6	25.2	25.5	25.4	25.0	25.3
New Zealand	24.9	24.7	24.8	25.2	25.1	25.0
United Kingdom ..	15.5	16.1	16.5	16.8	16.9	*
United States of America	24.6	24.9	25.0	24.3	24.1	23.5
Canada	28.2	28.0	28.3	27.6	27.5r	26.8

r Revised. *Not Available.

Deaths

For the year 1960 deaths from all causes totalled 12,370, giving a crude death rate (deaths per 1,000 mean population) of 8.5 compared with 8.6 in the previous year, and still below the crude death rate of the Commonwealth of Australia. Table V. compares the crude death rates of Queensland, other States, and certain overseas countries since 1955.

Diseases of the heart, hypertension and vascular lesions affecting the nervous system were again the greatest cause of death in the population.

There were 1,801 deaths from cancer as compared with 1,872 in 1959. This is about 15 per cent. of all deaths.

In every 100 male deaths 44 died of a degenerative vascular disease, 14 of cancer and 8 of accident. In every 100 female deaths the respective figures are 44, 15, and 5. The fatal accident rate was much higher in males than in females.

TABLE III
CRUDE DEATH RATE (PER 1,000 POPULATION)

	1955	1956	1957	1958	1959	1960
Commonwealth of Australia	8.9	9.1	8.8	8.5	8.9	8.6
Queensland	8.4	8.9	8.4	8.1	8.6	8.5
New South Wales ..	9.3	9.6	9.2	8.8	9.4	9.1
Victoria	8.9	9.2	9.0	8.6	8.9	8.5
South Australia ..	9.2	8.9	8.7	8.6	8.6	8.3
Western Australia ..	8.2	8.2	7.7	7.9	7.6	7.8
Tasmania	7.9	7.8	8.1	8.0	8.1	7.6
New Zealand	9.0	9.0	9.3	8.9	9.1	8.8
United Kingdom ..	11.7	11.7	11.5	11.7	11.7	*
United States of America	9.3	9.4	9.6	9.5	9.4	9.4
Canada	8.2	8.2	8.2	7.9	8.0r	7.8

r Revised. *Not Available.

Marriages

Registration of marriages during the year totalled 10,277, compared with 10,581 in 1959. The marriage rate was 7.0 per thousand mean population, compared with 7.4 in 1959. Marriages of minors during the year totalled 5,336, of whom 1,199 were males and 4,137 females.

Infant Mortality

The infant mortality rate of Queensland and other States and certain overseas countries is shown in Table VI., while Table V. is a composite one showing the births rates, infant mortality and reproduction rates of Queensland compared with the Commonwealth of Australia.

The net reproduction rate is higher than the Australian average, whilst the maternal mortality rate declined from 5.77 in 1911 to 0.68 in 1960.

If the crude death rate had remained at the level prevailing in 1900, over 4,600 additional deaths would have occurred in Queensland during 1960. In addition, the expectation of life has been increased by 17 years during that period.

The causes of death to residents of Queensland during 1960 are shown in Table IV.

TABLE IV

SHOWING CAUSES OF DEATH OF RESIDENTS OF QUEENSLAND, 1957-1960

Causes of Death	Males	Females	Total 1960	Persons		
				1959	1958	1957
Tuberculosis of Respiratory System	61	19	80	74	80	88
Tuberculosis, other	3	..	3	4	3	4
Diphtheria	..	1	1	..	..	1
Whooping Cough	..	..	..	1	1	4
Tetanus	5	8	13	13	9	12
Acute Poliomyelitis	..	..	..	..	..	1
Measles	..	1	1	3	1	..
Other Infectious and Parasitic Diseases	37	33	70 ^a	69 ^a	93 ^a	62
Malignant Neoplasms	1,038	763	1,801	1,872	1,703	1,725
Neoplasms, Benign and Unspecified	11	17	28	39	56	31
Hay Fever and Asthma	31	24	55 ^a	58 ^a	41 ^a	79
Diabetes Mellitus	60	85	145	141	156	116
Other Allergic, Endocrine System, Metabolic, and Nutritional Diseases	16	18	34	40	35	42
Pernicious and other Hyperchromic Anaemias	1	8	9	7	10	15
Other Diseases of the Blood and Blood-forming Organs	23	22	45	38	44	45
Mental, Psychoneurotic and Personality Disorders	65	22	87	79	64	73
Vascular Lesions affecting the Central Nervous System	778	881	1,669	1,589	1,416	1,475
Other Diseases of the Nervous System and Sense Organs	92	82	174	203	203	197
Diseases of the Heart	2,417	1,367	3,784	3,618	3,243	3,202
Hypertensive Disease	216	251	467	497	491	494
Other Diseases of the Circulatory System	255	184	439 ^a	351 ^a	327 ^a	304
Influenza	7	9	16	92	12	51
Lobar-pneumonia	61	26	87	109	92	119
Broncho-pneumonia	104	84	188	155	177	170
Other and Unspecified Pneumonia	75	50	125	126	70	141
Bronchitis	160	29	189 ^a	185 ^a	138 ^a	125
Other Diseases of Respiratory System	74	41	115	181	199	228
Diseases of Stomach and Duodenum	82	31	113	99	97	105
Appendicitis	10	7	17	24	16	26
Diseases of Liver, Gallbladder, and Pancreas	71	52	123	116	120	123
Other Diseases of Digestive System	76	86	162	184	176	183
Nephritis and Nephrosis	124	95	219	210	237	279
Diseases of Male Genital Organs	69	..	69	102	83	76
Other Diseases of Genito-Urinary System	75	98	173	115	117	110
Deliveries and Complications of Pregnancy, Childbirth, and Puerperium	..	24	24	21	16	21
Diseases of the Skin and Cellular Tissue	10	11	21	26	26	37
Diseases of the Bones and Organs of Movement	28	21	49	40	51	44
Congenital Malformations	108	97	205	198	148	169
Intra-cranial and Spinal Injury at Birth	31	19	50	66	68	69
Other Birth Injury	37	23	60	40	40	38
Post-Natal Asphyxia and Atelectasis	41	34	75	68	61	58
Infections of Newborn	11	10	21	29	25	32
Immaturity Unqualified	75	65	140	118	139	163
Other Diseases Peculiar to Early Infancy	52	44	96	75	69	71
Senility without mention of Psychosis	53	69	122	123	131	174
Symptoms Referable to Systems or Organs	7	1	8	5	10	16
Ill-defined and Unknown Causes	17	9	26	24	23	41
Motor Vehicle Traffic Accidents	254	77	331	354	354	312
Accidental Falls	75	96	171	212	208	186
Accidental Drowning and Submersion	44	8	52	72	73	58
Other Accidents	176	63	239	254	268	264
Suicide and Self-Inflicted Injury	120	52	172	197	212	199
Homicide and Injury Purposely Inflicted by Other Persons	12	5	17	33	23	21
Total from all Causes	7,248	5,122	12,370	12,349	11,455	11,679

^a Due to the introduction of the Seventh Revision of the International Stat. Classification of Diseases, Injuries, and Causes of Death, figures shown are not comparable with those of previous years.

TABLE V
BIRTH, INFANT MORTALITY, MATERNAL MORTALITY, AND REPRODUCTION RATES, QUEENSLAND AND AUSTRALIA

							Crude Birth Rate		Infant Mortality Rate		Maternal Mortality Rate (1)		Gross Reproduction Rate (2)		Net Reproduction Rate (3)	
							Queens-land	Aus-tralia	Queens-land	Aus-tralia	Queens-land	Aus-tralia	Queens-land	Aus-tralia	Queens-land	Aus-tralia
1946	..	..	..	..	..	..	24·8	23·7	29·3	29·0	2·26	1·85	1·55	1·46	1·42	1·33
1947	..	..	..	..	..	..	25·6	24·1	30·8	28·5	1·62	1·87	1·64	1·49	1·54	1·36
1948	..	..	..	..	..	..	24·7	23·1	28·0	27·8	1·47	1·40	1·59	1·45	1·51	1·33
1949	..	..	..	..	..	..	24·0	22·9	24·7	25·3	1·44	1·21	1·56	1·46	1·48	1·33
1950	..	..	..	..	..	..	24·4	23·3	24·8	24·5	1·45	1·09	1·60	1·49	1·52	1·42
1951	..	..	..	..	..	..	24·2	23·0	25·7	25·2	1·18	1·05	1·62	1·49	1·54	1·21
1952	..	..	..	..	..	..	24·6	23·3	24·9	23·8	1·03	0·94	1·67	1·55	1·59	1·47
1953	..	..	..	..	..	..	23·9	22·9	25·0	23·3	0·71	0·62	1·65	1·56	1·57	1·48
1954	..	..	..	..	..	..	23·7	22·5	22·3	22·5	0·96	0·69	1·67	1·56	1·62r	1·50r
1955	..	..	..	..	..	..	24·2	22·6	20·3	22·0	0·62	0·64	1·71	1·59	1·65r	1·53r
1956	..	..	..	..	..	..	23·7	22·5	22·7	21·7	0·89	0·56	1·72	1·61	1·66r	1·55r
1957	..	..	..	..	..	..	24·2	22·9	21·6	21·4	0·62	0·63	1·78	1·66	1·72r	1·60r
1958	..	..	..	..	..	..	23·9	22·6	19·4	20·5	0·47	0·50	1·79	1·67	1·72	1·60
1959	..	..	..	..	..	..	24·8	22·6	20·3	21·5	0·59	0·46	1·87	1·68	1·80	1·61
1960	..	..	..	..	..	..	24·1	22·4	21·0	20·2	0·68	0·53	1·84	1·68	1·77	1·61

r Revised rates based on 1953-55 Mortality experience.
(1) *Maternal Mortality Rate*.—Deaths from puerperal causes per 1,000 live births.
(2) *Gross Reproduction Rate*.—Represents the number of female children born on the average to women living right through the child-bearing years if the conditions on which the rate is based continue.
(3) *Net Reproduction Rate*.—Is the gross reproduction rate corrected for deaths of females from birth to the end of the child-bearing period. It is a more accurate index than the gross reproduction rate. Unless it exceeds unity the population is not replacing itself.

TABLE VI
INFANT MORTALITY RATES (DEATHS UNDER ONE YEAR PER 1,000 LIVE BIRTHS)

							1954	1955	1956	1957	1958	1959	1960
Commonwealth of Australia	..						22·5	22·0	21·7	21·4	20·5	21·5	20·2
Queensland	..	..	..	..			22·3	20·3	22·7	21·7	19·4	20·3	21·0
New South Wales	..	..	..	..			25·3	24·9	23·5	22·7	21·3	22·7	21·2
Victoria	..	..	..	..			19·3	18·4	19·3	20·2	19·2	21·2	18·5
South Australia	..	..	..	..			21·3	23·3	19·9	20·6	22·4	20·7	18·9
Western Australia	..	..	..	..			22·5	22·4	22·7	21·1	21·5	20·2	21·6
Tasmania	..	..	..	..			23·9	23·4	22·0	20·2	19·5	23·4	19·1
New Zealand	..	..	..	..			20·0	20·1	19·4	20·0	19·4	19·9	19·7
United Kingdom	..	..	..	..			26·3	25·9	24·4	24·0	23·4	23·1	*
United States of America	..	..	..	..			26·6	26·4	26·0	26·3	26·9	*	*
Canada	..	..	..	..			31·9	31·3	31·9	30·9	30·2	28·4	*

* Not available.

DIVISION OF PUBLIC HEALTH SUPERVISION

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Chief Inspector of Food and Drugs: W. H. KELLY
Chief Sanitary Inspector: W. D. PRYOR
Secretary to Director-General of Health and Medical Services: R. WOODLEY
Microscopist-in-Charge, Hookworm Control: Vacant

INSPECTORS IN CHARGE OF DISTRICT OFFICES

Townsville: H. P. LOWES
Toowoomba: W. J. SHIELDS
Mackay: R. A. BURKE
Cairns: W. T. JOHNSTON
Rockhampton: R. G. C. J. CUFFE
Bundaberg: C. V. JAMES

SECTION OF EPIDEMIOLOGY

Tables VII. and VIII. show the reported incidence of notifiable diseases during the year and Table IX. gives the same information for the calendar year 1960.
Total notification were 2,740 (941 in Brisbane and 1,799 in the rest of Queensland) compared with 2,886 (949 and 1,937) for 1959-60. Notifications to increase were Anchylostomiasis (+ 24), Infantile Diarrhoea (+ 19), Hepatitis (+ 115), Poliomyelitis (+ 25), Rheumatic Fever (+ 27), Rubella (+ 9) and Tetanus (+4). Notifications which declined were Breast Abscess (—49), Bacillary Dysentery (—11), Leptospirosis (—55), Meningitis (—7), Malaria (—25), Q. Fever (—179), Tuberculosis (—20), and Typhoid Fever (—5). Some of these alterations are significant and these receive comment below.

In many diseases, however, there is evidence of inadequate notification. For example, hospitals notify better than do doctors in general practices. It has long been felt that the present notification form was out of date. It requires information (such as the name of the householder) which is now of little value, and it has no provision for stating previous immunizations against tetanus or poliomyelitis. After several conferences with the Queensland Branch of the British Medical Association, agreement was reached on a new notification

form. This is now being printed and will shortly be distributed to all doctors. The new form is shorter and simpler, and better notification should be the result. The new form can also be pasted on a punch card and indexed at once. This will enable rapid and fairly complete classification to be carried out at any time.

ANCHYLOSTOMIASIS

The increase in notified cases is not significant but is a reminder that this disease is always with us. A new drug, bephenium hydroxynaphthoate ("Alcopar") was widely used on aboriginal settlements and missions during the year, and appears to be the best drug yet developed to treat Anchylostoma duodenale, which is much more resistant to tetrachlorethylene than Necator americanus. A single dose of 5G (or three doses each of 2.5G) effects a very considerable reduction in infestation. Apart from its bitter taste, some children vomit the drug, but it is almost free from undesirable side effects. In addition, purgatives are not required.

With "Alcopar" total eradication of hookworm disease would be possible if hygiene could be taught to and practised by aboriginals to prevent pollution of the soil by human excreta. Unfortunately, this seems to belong to some future time.

TABLE VII
NOTIFICABLE DISEASES (EXCLUSIVE OF VENEREAL DISEASES) 1ST JULY, 1960, TO 30TH JUNE, 1961
METROPOLITAN AREA (POPULATION AT 1ST JULY, 1960—578,000)

Diseases	Months												Totals 1960-61	Totals 1959-60
	1960						1961							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	..	1	1	..	1	1	9	1	5	..	..	1	20	4
Anthrax	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	2	..	2	1	6	2	2	1	1	2	2	..	21	28
Brucellosis	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Cholera	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Diarrhoea (Infantile)	15	16	9	10	10	6	4	14	12	8	10	7	121	105
Diphtheria	..	..	..	..	..	..	1	1	..	..	..	..	2	..
Dysentery (Amoebic)	..	..	..	..	..	1	..	..	..	..	1	..	2	1
Dysentery (Bacillary)	2	..	..	2	3	3	5	2	2	2	4	1	26	25
Encephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis—(Infective)	7	7	17	21	21	21	23	15	24	6	10	23	195	149
Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	1	1	2	..	1	..	..	..	..	..	..	..	5	7
Leprosy	..	..	..	..	..	1	..	..	..	..	..	..	1	1
Leptospirosis	1	..	1	..	1	2	..	..	..	1	1	..	7	15
Malaria	2	2	2	6	1	1	1	1	1	1	2	1	21	47
Meningitis	..	..	..	1	1	..	1	..	..	..	..	..	3	12
Neo-Natal Infections	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ornithosis (Psittacosis)	..	..	..	..	..	..	..	1	..	..	..	..	1	..
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis—														
Paralytic	..	..	..	..	..	..	..	..	..	..	1	4	5	1
Non-Paralytic	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Puerperal Infections	..	..	..	..	..	..	..	..	..	2	..	..	2	2
Q Fever	6	4	1	1	7	8	..	..	1	..	3	3	34	103
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	5	7	9	11	7	4	1	7	1	4	3	5	64	46
Rubella	..	..	..	4	4	1	..	2	1	..	..	..	12	1
Scarlet Fever	8	10	12	13	7	5	3	2	9	3	4	5	81	62
Smallpox	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Taeniasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tetanus	2	..	1	..	..	..	1	1	2	2	..	..	9	14
Tuberculosis	12	24	26	21	25	28	29	18	18	36	17	49	303	313
Typhoid Fever	..	..	..	..	..	..	..	..	1	1	..	..	2*	7
Typhus Fever—														
Epidemic	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Murine	..	..	..	..	..	..	..	1	..	1	..	2	4	3
Scrub	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	63	72	83	91	95	84	80	67	78	69	58	101	941	949

* April Case—Paratyphoid

TABLE VIII

Diseases	Months												Totals 1960-61	Totals 1959-60
	1960						1961							
	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June		
Anchylostomiasis	37	6	11	2	1	..	3	..	..	2	2	1	65	57
Anthrax	2	5	9	3	2	1	2	..	1	..	1	1	27	69
Breast Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..	2
Brucellosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cholera	..	1	..	..	..	..	..	..	..	..	..	..	1	..
Dengue	7	17	8	10	3	1	2	6	5	..	2	..	61	58
Diarrhoea (Infantile)	1	..	..	1	4	..	..	..	..	1	..	..	6	6
Diphtheria	..	..	..	..	..	..	1	..	..	..	..	..	2	7
Dysentery (Amoebic)	2	3	2	..	..	..	2	..	2	..	..	3	14	26
Dysentery (Bacillary)	..	1	1	..	..	..	..	..	..	..	..	..	2	2
Encephalitis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Filariasis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis—														
Infective	27	51	57	67	71	56	65	68	49	44	52	53	660	591
Serum	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydatid Disease	1	5	8	7	3	3	3	5	1	3	..	..	39	38
Lead Poisoning	..	..	..	1	..	..	..	..	1	..	..	..	2	..
Leprosy	5	7	12	5	..	3	3	8	7	7	8	11	76	123
Leptospirosis	..	1	1	1	2	..	..	1	1	..	4	1	12	11
Malaria	2	4	4	1	2	1	2	7	1	2	4	1	31	29
Meningitis	..	..	..	..	..	..	..	..	1	..	..	..	1	2
Neo-Natal Infections	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ornithosis (Psittacosis)	..	..	..	..	..	..	..	..	1	..	..	..	1	2
Plague	..	..	..	..	..	..	..	..	..	..	..	..	..	..
+Poliomyelitis—														
Paralytic	..	..	2	1	2	..	1	1	3	6	5	3	24	3+
Non-Paralytic	..	1	2	1	2	6	1	3	6	1	2	2	27	33
Puerperal Infections	12	10	7	10	14	9	12	12	15	10	14	12	137	247
Q Fever	7	9	6	10	7	1	2	6	2	5	2	5	62	53
Rheumatic Fever	..	1	..	..	..	..	..	..	..	..	..	..	1	3
Rubella	1	5	7	5	6	5	3	2	..	5	4	4	47	64
Scarlet Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Smallpox	3	2	4	1	1	3	2	2	2	2	4	5	31	22
Taeniasis	34	61	38	30	48	37	31	40	25	29	22	69	464	474
Tetanus	..	..	..	..	..	..	1	1*	1*	..	..	..	3	3
Tuberculosis	..	..	..	..	..	..	..	..	..	..	..	..	..	..
*Typhoid Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Typhus Fever—														
Epidemic	2	..	..	..	..	..	1	..	2	..	..	..	5	4
Murine	1	..	..	..	..	..	..	..	..	..	1	..	2	9
Scrub	..	..	1	..	..	..	..	..	..	..	..	..	1	1
Tick	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	144	190	178	156	168	126	137	162	124	114	129	171	1,799	1,937

+ One Case June 1960 now proved negative.

* February and March Cases Paratyphoid.

TABLE IX

Diseases								Metropolitan Area	Outside Areas	Totals for Queensland, 1960	Totals for Queensland, 1959
Anchylostomiasis	..	..	..	..	..	..	..	6	76	82	63
Anthrax	..	..	..	..	..	..	..	..	..	..	..
Breast Abscess	..	..	..	..	..	..	..	24	47	71	123
Brucellosis	..	..	..	..	..	..	..	..	..	..	4
Cholera	..	..	..	..	..	..	..	..	..	..	..
Dengue	..	..	..	..	..	..	..	..	1	1	..
Diarrhoea (Infantile)	..	..	..	..	..	..	..	109	66	175	185
Diphtheria	..	..	..	..	..	..	..	..	6	6	7
Dysentery (Amoebic)	..	..	..	..	..	..	..	2	1	3	13
Dysentery (Bacillary)	..	..	..	..	..	..	..	30	17	47	51
Encephalitis	..	..	..	..	..	..	..	2	3	5	3
Filariasis	..	..	..	..	..	..	..	..	..	..	..
Hepatitis (Infective and Serum)	..	..	..	..	..	..	..	182	537	719	762
Hydatid Disease	..	..	..	..	..	..	..	..	..	..	..
Lead Poisoning	..	..	..	..	..	..	..	7	57	64	19
Leprosy	..	..	..	..	..	..	..	1	1	2	6
Leptospirosis	..	..	..	..	..	..	..	14	91	105	134
Malaria	..	..	..	..	..	..	..	47	11	58	46
Meningitis	..	..	..	..	..	..	..	6	24	30	34
Neo-Natal Infections	..	..	..	..	..	..	..	..	..	..	..
Ornithosis (Psittacosis)	..	..	..	..	..	..	..	..	2	2	..
Plague	..	..	..	..	..	..	..	..	..	..	..
Poliomyelitis (Paralytic and Non-Paralytic)	..	..	..	..	..	..	..	..	5	5	4
Puerperal Infections	..	..	..	..	..	..	..	1	28	29	60
Q Fever	..	..	..	..	..	..	..	75	180	255	595
Relapsing Fever	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Fever	..	..	..	..	..	..	..	59	67	126	129
Rubella	..	..	..	..	..	..	..	9	3	12	7
Scarlet Fever	..	..	..	..	..	..	..	71	57	128	148
Smallpox	..	..	..	..	..	..	..	..	..	..	..
Taeniasis	..	..	..	..	..	..	..	..	..	..	..
Tetanus	..	..	..	..	..	..	..	13	29	42	29
Tuberculosis	..	..	..	..	..	..	..	304	540	844	749
Typhoid Fever	..	..	..	..	..	..	..	5	2	7	7
Typhus Fever—											
Epidemic	..	..	..	..	..	..	..	..	..	..	..
Murine	..	..	..	..	..	..	..	2	2	4	6
Scrub	..	..	..	..	..	..	..	..	8	8	3
Tick	..	..	..	..	..	..	..	..	1	1	3
Yellow Fever	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	..	969	1,862	2,831	3,189

BREAST ABSCESS

Notifications of breast abscess declined from 97 to 48, the extra metropolitan notifications falling from 69 to 27. It is difficult to believe that this is a real decline because the virulent staphylococcus is still present in our hospitals. It is likely that this is being under-reported now that the term "golden staph" is no longer in the news so often.

The survey into the incidence of staphylococcal infections in surgical wounds at Princess Alexandra Hospital has continued during the year and details will be found in the report of the Laboratory of Microbiology and Pathology. It is extremely interesting to note that the infection rate has been very substantially reduced in the two wards under survey and particularly in one ward. This fall is attributed to the staff being conscious of the survey and to their interest and keenness in preventing infection by the practice of safe techniques. In connection with this survey, tests have been carried out on two types of vacuum cleaner filter with bacteria proof filters. Both gave excellent results. The principle of filtering the air as dust is removed from the floor is a sound one, and one likely to be developed in hospital cleaning services. Floors of wards harbour a huge bacterial population and this must be reduced rather than merely disturbed.

INFANTILE DIARRHOEA

Notified cases increased slightly to 182 from 163, but this is not significant. Every year, some thousands of children under two years of age must develop diarrhoeal attacks lasting 48 hours or longer, but the vast majority of these are not diagnosed by bacteriological test. By and large, the young children sick enough to be notified are sick enough to be admitted to a hospital. The prevalent types and strains are not recorded in most cases, and it seems a pity that more epidemiological studies cannot be carried out to chart the changing patterns of intestinal infections in babies. At the present time, all that can be said is that most of the infections are mild, and that the gastro enteritis which filled the children's wards some thirty years ago is not now evident.

DIPHTHERIA

Eight notifications were received, two being from the Greater Brisbane area. Three were males (aged 2, 4, and 13 years), and five were females (aged 15 months and 2, 3, 22, and 28 years). Of these, two died (a female baby aged 15 months and a girl aged 3 years) and there was a history of one injection only in the girl. Of the others, two had never been immunized (one being 2 years and the other 4 years old), two had no history of immunization and one was "probably" immunized at the age of 10 years. It can be seen that this record is unsatisfactory and that there are still some thoughtless or ignorant parents in our midst. Diphtheria can be kept banished only by active immunization of every child, together with booster doses at the recommended ages. With prevention so effective, it is a pity to see any cases of diphtheria in children today.

INFECTIVE HEPATITIS

Apart from rigid personal hygiene after using the toilet, and after touching objects of common contact (such as straps and door handles) there is little that can be done to prevent the spread of infective hepatitis in a community. We are as helpless before its onslaught as we were against poliomyelitis five years ago. The two diseases have something in common—they are certainly spread from the intestine and may be spread by droplets from the throat. Both seem to occur in localised outbreaks with the heaviest incidence in country districts that have not been visited by the disease for some years, so that presumably individual immunity is absent or waning. During the year, 855 patients were notified and the age incidence for 1960-61 and for 2,453 cases now notified since the disease was first made notifiable, are set out in Table X.

TABLE X

SHOWING AGE DISTRIBUTION OF 855 NOTIFIED PATIENTS WITH INFECTIVE HEPATITIS DURING 1960-61, TOGETHER WITH THAT OF 2,453 PATIENTS NOW NOTIFIED

Age Group	Expected Per-centage*	1960-61		Previous Years	
		Number	Per-centage	Number	Per-centage
0- 4 years ..	11.2	18	2.1	85	3.5
5-14 years ..	18.7	283	33.1	902	36.8
15-24 years ..	14.2	175	20.5	451	18.4
25-39 years ..	21.8	240	28.1	656	26.7
40 years and over	34.1	118	13.8	290	11.8
Age unstated ..	..	21	2.4	69	2.8
	100.0	855	100.0	2,453	100.0

* On age distribution of Queensland population (1954 Census).

Children comprise the largest single age group involved, but relatively few notified patients are pre-school children. This would appear to indicate that the enlarged range of contacts outside the family that come with school life may be an important source of infection in children. The incidence is twice as high as would be expected from the population in the age group 5 to 14 years. Indeed, the incidence in people aged 5 to 39 years is relatively high. This group comprises about 55 per cent. of our population and has contributed about 82 per cent. of the notified cases since infective hepatitis became notifiable.

The notified cases were distributed widely. The Greater Brisbane area contributed 195. Next came the Local Authority areas of Gold Coast (125), followed by Toowoomba (62), Cloncurry (46), Pioneer (32), Nanango (30), Ipswich (29), Perry (22), Albert (15), Herberton (15), Inglewood (14), Redcliffe (14), Goondiwindi (13), Kolan (13), Eacham (12), Jondaryan (11), Landsborough (11), and Bundaberg (11).

LEPTOSPIROSIS

Following the practice last year, all patients giving positive leptospiral agglutination tests were followed up. Some of the results of this survey are shown in Tables XI., XII. and XIII.

Patients totalled 162 compared with 194 in 1959-60. There were 151 males and 11 females indicating the special occupational risk of males. The age distribution of cases was.—Under 20 years—30.2 per cent.; 20-39 years—45 per cent.; 40-59 years—19.1 per cent.; and 60 years and over—1.8 per cent. The metropolitan and Moreton statistical divisions contributed 57 cases (35 per cent.), and the Cairns division contributed 46 (28 per cent.) of the patients. The latter division includes all the sugar cane districts north of Townsville, and so represents a major endemic area.

There is a definite occupational distribution for leptospirosis. Meat industry employees provided 40 cases (25 per cent.), dairying 25 (16 per cent.), and sugar cane workers 15 (or 9 per cent.). Most cases occurred in the wet season—which is the usual experience in Queensland. Of the patients diagnosed, 17 lived in New South Wales.

Leptospirosis is an interesting disease, and a good deal of what is known about its epidemiology has been the outcome of research conducted by the Laboratory of Microbiology and Pathology and the Queensland Institute for Medical Research. If suitable protective clothing were worn by exposed workers, leptospirosis would almost disappear, but it is difficult to induce men to wear this when performing heavy work in a hot climate.

TABLE XI
LEPTOSPIROSIS—1960-61
SHOWING STATISTICAL DIVISIONS, OCCUPATIONS OF PATIENTS, AND MONTH OF ONSET

Statistical Divisions	Meat	Dairying	Sugar Growing	Other Primary	Others	Sheep and Wool	Totals	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June
Metropolitan ..	12	..	..	3	13	..	28	1	1	1	1	7	3	3	2	3	4	1	1
Brisbane Abattoirs ..	2	..	..	..	..	..	2	1	..	..	..	..	1	..	..	..	..	..	..
Moreton ..	8	13	..	2	3	1	27	2	1	1	..	2	3	4	1	2	5	4	2
Maryborough ..	..	4	..	4	3	..	11	1	1	1	..	..	..	..	2	3	1	1	1
Downs ..	2	1	..	..	4	..	7	..	..	..	..	..	3	2	1	..	..	..	1
Roma ..	..	..	..	..	..	2	2	..	..	..	..	..	..	1	..	1	..	..	..
South Western ..	..	..	..	..	..	2	2	..	..	..	..	1	1	..	..	..	..	..	..
Rockhampton ..	2	1	..	3	3	..	9	..	2	..	..	..	..	2	1	1	1	2	..
Central Western ..	1	..	..	..	..	3	4	1	..	..	..	..	..	..	2	1	..	..	..
Far Western ..	..	..	..	..	..	1	1	..	..	..	..	..	..	1	..	..	..	..	..
Mackay ..	1	1	..	..	..	..	2	..	..	..	..	..	..	1	..	..	..	1	..
Townsville ..	2	..	..	..	1	..	3	1	..	..	..	..	..	..	..	1	..	1	..
Cairns ..	5	2	15	11	13	..	46	5	7	2	1	1	1	2	2	10	6	6	3
Peninsula ..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Western ..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1
Outside Queensland ..	4	3	..	1	9	..	17	1	..	2	1	1	..	5	2	4	1	..	..
Totals ..	40	25	15	24	49	9	162	13	10	9	3	12	12	21	13	26	18	16	9

TABLE XII
LEPTOSPIROSIS—1960-61

SHOWING STATISTICAL DIVISIONS WHERE CASES OF LEPTOSPIROSIS LIVED, TOGETHER WITH BIO-TYPE CAUSING INFECTION

Statistical Divisions	Ictero	Canicola	Zanoni	Robinson	Australis	Esposito	Pomona	Hyos	Kremas-tos	Celladoni	Grippo	Hebdomadis Sero Group	Dual Infections	Totals
Metropolitan	1	1	..	..	..	1	22	2	..	..	1	..	..	28
Brisbane Abattoirs	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Moreton	..	..	..	..	1	2	23	1	..	..	..	..	..	27
Maryborough	..	..	..	..	..	1	9	1	..	..	..	..	..	11
Downs	..	..	..	..	..	..	7	..	..	..	..	..	..	7
Roma	..	..	..	..	..	..	..	1	..	..	..	1	..	2
South Western	..	..	..	..	..	..	2	..	..	..	..	..	..	2
Rockhampton	..	..	..	..	..	1	8	..	..	..	..	..	..	9
Central Western	..	..	..	..	..	..	3	1	..	..	..	..	..	4
Far Western	..	..	..	..	..	..	1	..	..	..	..	..	..	1
Mackay	..	..	..	..	..	..	1	1	..	..	..	..	..	2
Townsville	..	..	1	..	..	1	1	..	..	..	..	..	..	3
Cairns	..	2	9	3	9	3	14	..	2	..	..	3	1	46
Peninsula	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Outside Queensland	..	..	..	..	1	1	14	1	..	..	..	..	..	17
Totals	1	3	10	3	11	10	106	10	2	..	1	4	1	162
Percentages	0.6	1.9	6.2	1.9	6.8	6.2	65.4	6.2	1.2	..	0.6	2.4	0.6	..

TABLE XIII
LEPTOSPIROSIS—1960-61

SHOWING AGE DISTRIBUTION OF CASES, THE STATISTICAL DIVISIONS WHERE THEY LIVED, SEX OF PATIENTS AND WHETHER ADMITTED TO HOSPITAL OR NOT

Statistical Divisions	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70 and over	Un-known	Totals	In Hos-pital	Not in Hos-pital	Males	Fe-males
Metropolitan	..	11	3	4	6	3	1	..	..	28	20	8	26	2
Brisbane Abattoirs	..	1	..	1	..	..	..	..	..	2	2	..	2	..
Moreton	1	9	8	3	4	..	..	..	2	27	11	16	26	1
Maryborough	..	2	6	1	2	..	..	..	..	11	6	5	10	1
Downs	..	2	2	1	1	..	..	..	1	7	1	6	7	..
Roma	..	..	2	..	..	..	..	..	..	2	2	..	2	..
South Western	..	..	2	..	..	..	..	..	..	2	2	..	2	..
Rockhampton	..	1	2	3	2	1	..	..	..	9	2	7	8	1
Central Western	..	1	1	..	2	..	..	..	..	4	2	2	4	..
Far Western	..	1	..	..	..	..	..	..	..	1	1	..	1	..
Mackay	..	1	1	..	..	..	..	..	..	2	1	1	2	..
Townsville	..	..	1	..	2	..	..	..	..	3	2	1	3	..
Cairns	4	8	16	9	2	3	..	2	2	46	35	11	41	5
Peninsula	..	..	..	..	..	..	..	..	..	..	..	..	..	..
North Western	..	..	..	..	1	..	..	..	..	1	..	1	1	..
Outside Queensland	1	6	4	3	2	..	..	..	1	17	3	14	16	1
Totals	6	43	47	26	24	7	1	2	6	162	90	72	151	11

LEAD POISONING

As in recent years, Rockhampton District contributed most notified cases (27 out of 44). Doctors in this city, together with those in adjacent Shires of Fitzroy and Livingstone, have become very conscious of the possibility of lead intoxication in children living in the numerous wooden houses which were painted many years ago. Males comprised 31 notifications and seventeen (17) of the patients (10 males and 7 females) were under 5 years of age with 23 (17 males and 6 females) aged between 5 and 15 years. Although lead paints cannot now be used on houses or furniture, there are still many houses painted with lead paint more than twenty years ago, and that paint is now peeling, powdering and poisonous to inquisitive and idle children.

POLIOMYELITIS

Twenty-nine notifications for poliomyelitis were received—five from Brisbane and twenty-four from country areas. This is the highest number received since 1956-57, when forty-five cases were reported. Salk vaccination began in July 1956 and after the campaign had been running some months, there was a dramatic fall in the incidence of the disease. This fall was attributed largely to the effects of the vaccine. The present increases in cases gives no reason to alter the views held regarding its efficiency.

All reported cases of the disease are investigated carefully. Clinical reports are forwarded to a special Poliomyelitis Surveillance Committee appointed by the National

Health and Medical Research Council, and faecal and serum samples are forwarded to The Commonwealth Serum Laboratories, Melbourne, for examination for the presence of polio-virus and antibody production. Such investigations take time and reports of the Committee were received for twenty-two of the reported cases. Of these, thirteen were regarded as proven cases, seven as negative, and two as doubtful cases. An analysis of the immunisation status of the thirteen positive cases, showed that eleven had received no injection of Salk vaccine; one case had received one injection and only one had received the recommended course of three injections.

Salk vaccination has been available to children since 1956 and to adults since 1958. The response in the children was about ninety per cent., and in adults, about fifty per cent. During the latter half of 1960, the bulk of injections being administered was to babies and the rate of immunisation was proportionate to the birth rate. In December, 1960, the Commonwealth Serum Laboratories, which up till then, had a magnificent record in vaccine production, had an unfortunate breakdown in production. During the first half of 1961, virtually no supplies of Salk vaccine were available. This was offset, partially by the availability, from March, 1961, of quadruple antigen. This combined antigen is used to protect infants from six months to two years against whooping cough, tetanus, diphtheria and poliomyelitis, and is likely to find increasing use, particularly if it is found possible to lower the minimum age at which the vaccine can be given.

Q FEVER

The survey which began on 1st July, 1957, into the epidemiology of Q fever in Queensland, has now come to a close, because it was felt that a longer survey would not reveal any significant new information. Tables XIV., XV., and XVI. show the age distribution, month of onset, occupation and sex of 279 patients during the year 1960-61.

As in previous year, the Greater Brisbane area, the Brisbane abattoirs and the Moreton statistical area contributed the greatest number of cases viz. 129 (or 64 per cent.). The Darling Downs and the Central Western divisions had 70 cases (25 per cent.), Months of highest incidence were February, April and November. The age groups of the patients were as follows:—under 20 years—58 (21 per cent.); 20-39 years—128 (48 per cent.); 40-59 years—78 (28 per cent.); and 60 years and over—11 (4 per cent.). Of the occupations, 103 (37 per cent.) were meat workers, 70 (25 per cent.) were handling sheep or wool in our Western districts, and 24 (9 per cent.) were in the dairying industry. As usual, all but 10 of the patients were males.

The endemicity of Q fever in cattle and in sheep is now well established. Native animals (such as kangaroos, wallabies, and bandicoots) form another reservoir of infection, but the chief source of infection in Queensland is undoubtedly cattle (including dairy herds) and sheep. The early studies, twenty years ago, revealed the close association of Q fever with cattle, but the last three years have witnessed

a dramatic spread to the sheep industry. Here, sheep and kangaroos can both become infested with the kangaroo tick (*Amblyomma triguttatum*) from which several strains of Q fever have been isolated. Probably the original cycle was kangaroo-tick-kangaroo, but *Amblyomma triguttatum* will attack a wide range of hosts, including cattle, sheep, goats, dogs, and horses. Wherever this tick is prevalent, therefore, spread to domestic animals can be anticipated and it is then only a matter of time before cases occur in human beings whose work brings them into contact with these animals or their products (such as hides and wool). In the sheep industry, sporadic cases occurred in humans before 1958, but in that year an outbreak occurred in the Tambo-Blackall district which was unlike any experienced previously in living memory. Apparently an increase in kangaroo population, due to drought further inland, had led to a heavy increase in tick infestation of sheep. Man was infected through accidental intrusion of this cycle—the shears caused tick products to be inhaled, or the “dust” in wool contained tick faeces.

As mentioned in other reports, cases of Q fever were diagnosed again from other States, eight being from the North Coast of New South Wales, one from Newcastle (N.S.W.), one from Broken Hill (a grazier), and one from South Australia.

It is quite obvious that Q fever could be endemic wherever there are sheep, cattle, native fauna, and the appropriate ticks. These conditions apply over a large area of inland Australia.

TABLE XIV
Q FEVER SURVEY—1960-61
SHOWING OCCUPATION AND SEX OF PATIENTS AND STATISTICAL DIVISIONS WHERE THEY LIVED

Statistical Divisions	Sheep and Wool	Meat	Dairying	Other Primary	Others	Unknown	Totals	(Including Females)
Metropolitan	..	13	..	..	17	..	30	2
Brisbane Abattoirs	..	31	..	..	10	..	41	..
Moreton	..	32	11	1	4	..	48	1
Maryborough	..	..	1	1	4	..	6	1
Downs	7	9	4	8	2	2	32	2
Roma	14	..	..	1	..	..	15	..
South Western	9	1	..	..	..	..	10	..
Rockhampton	..	3	1	2	2	..	8	1
Central Western	33	..	..	1	4	..	38	..
Far Western	7	..	..	..	..	..	7	..
Mackay	..	1	3	..	1	..	5	1
Townsville	..	1	1	..	4	..	6	..
Cairns	..	8	2	7	4	..	21	1
Peninsula	..	..	..	1	..	..	1	..
North Western	..	..	..	..	..	..	..	..
Outside Queensland	..	5	1	2	2	1	11	1
Totals	70	104	24	24	54	3	279	10
Percentage	25.1	37.3	8.6	8.6	19.4	1.0	100.0	..

TABLE XV
Q FEVER SURVEY—1960-61
SHOWING MONTH OF ONSET OF ILLNESS AND STATISTICAL DIVISIONS WHERE PATIENTS LIVED

Statistical Divisions	Un-known	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	April	May	June	Totals
Metropolitan	1	4	3	1	..	2	1	..	1	7	1	7	2	30
Brisbane Abattoirs	..	5	2	1	2	6	1	..	..	..	6	8	10	41
Moreton	1	2	3	6	5	3	4	1	1	5	8	7	2	48
Maryborough	..	..	1	1	..	..	..	..	1	..	1	..	2	6
Downs	..	3	2	4	3	4	3	1	2	3	4	2	1	32
Roma	..	..	..	..	1	2	..	4	5	1	1	..	1	15
South Western	..	..	1	1	..	3	2	1	1	1	..	..	..	10
Rockhampton	..	..	..	3	1	..	2	..	..	..	..	..	2	8
Central Western	..	1	2	3	..	4	1	4	15	3	2	..	3	38
Far Western	..	..	2	..	1	..	1	..	2	1	..	..	..	7
Mackay	..	..	..	..	3	..	..	..	..	..	1	..	1	5
Townsville	..	1	..	1	..	..	..	..	1	2	..	1	..	6
Cairns	..	..	1	3	1	5	2	1	2	..	5	..	1	21
Peninsula	..	..	..	1	..	..	..	..	..	..	..	..	..	1
North Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	2	..	1	..	..	1	1	..	4	1	1	11
Totals	2	16	19	25	18	29	17	13	32	23	33	26	26	279

TABLE XVI
Q FEVER SURVEY, 1960-1961
SHOWING AGE DISTRIBUTION OF CASES AND STATISTICAL DIVISION WHERE THEY LIVE AND WHETHER ADMITTED TO HOSPITAL OR NOT

Statistical Division				0-9	10-19	20-29	30-39	40-49	50-59	60-69	70 Years and Over	Age Un-known	In Hospital	Not in Hospital	Totals
Metropolitan	..	..	..	1	4	9	5	7	4	..	..	..	15	15	30
Brisbane Abattoirs	..	..	..	..	16	9	6	5	2	3	..	..	20	21	41
Moreton	..	..	..	2	17	12	4	7	5	1	..	..	32	16	48
Maryborough	..	..	..	1	..	..	1	3	1	..	..	..	4	2	6
Downs	..	..	..	..	1	8	8	7	6	..	..	2	8	24	32
Roma	..	..	..	..	..	9	2	3	1	..	..	..	..	15	15
South Western	..	..	..	..	2	3	3	1	1	..	..	..	7	3	10
Rockhampton	..	..	..	..	2	1	2	3	..	..	..	..	2	6	8
Central Western	..	..	..	1	4	13	10	3	2	4	1	..	16	22	38
Far Western	..	..	..	..	1	3	2	1	..	..	..	..	2	5	7
Mackay	..	..	..	..	..	1	4	..	..	..	..	..	4	1	5
Townsville	..	..	..	..	1	1	1	1	1	..	1	..	2	4	6
Cairns	..	..	..	1	2	1	7	6	3	1	..	..	11	10	21
Peninsula	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
North Western	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Outside Queensland	..	..	..	..	2	2	..	3	2	..	..	2	3	8	11
Totals	..	..	..	6	52	72	56	50	28	9	2	4	127	152	279

TETANUS

In previous years, I have commented with pleasure on the decline in tetanus in children since triple vaccine was introduced in 1953. Up till that time, almost half of all notified cases were under the age of fifteen years. The trend since then is seen in Table XVII.

TABLE XVII
SHOWING AGE DISTRIBUTION OF 290 NOTIFIED CASES OF TETANUS IN THREE TRIENNIAL PERIODS SINCE 1952-55

Triennial Period*			Notifications		Percentage under 15
			Under 15 years	All ages	
1952-55	..	..	41	87	47.1
1955-58	..	..	41	87	47.1
1958-61	..	..	29	116	25.0

* Financial Years.

There now appears to be a definite and significant shift in incidence in children. I feel this trend will continue. The one sad fact is that the total number of notified cases of tetanus shows no decline. This indicates the need for further health education in adults. Protection is so effective and so cheap that everyone should take advantage of it.

SECTION OF AIR POLLUTION

During the year the Air Pollution Committee has met on several occasions to discuss a draft report. This is expected to be available within the next two (2) months. Until the report and its recommendations have been considered by the Government, no comment can be made.

HANSEN'S DISEASE

(1) HANSEN'S DISEASE IN THE WHITE POPULATION

Medical Supervision: M. H. GABRIEL, B.Sc., M.B., B.S. (Q'ld), A.R.A.C.I., Health Officer,
Health and Medical Section.

Trends during the past ten years have encouraged the belief that Hansen's disease would one day be completely eliminated from the white population in Queensland. It is felt that this happy day is near at hand since the current year has closed with only three active cases in hospital. Four new white cases have been detected in the past two years and all of these patients were over fifty years of age on admission and showed evidence of having had signs of

Hansen's disease for five years or more before being detected. The absence of younger patients is reassuring.

The two measures responsible for this are, firstly, that all infectious patients, as judged by the ease with which *Mycobacterium leprae* can be demonstrated in the superficial tissues, are isolated; and secondly, that every worthwhile drug active in Hansen's disease has been introduced into treatment in this State as soon as possible, and treatment has been prosecuted with the utmost vigour.

TABLE XVIII
COMPARISON OF STATISTICS FOR THE FINANCIAL YEARS 1958-59-60-61

	1958-59			1959-60			1960-61		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Population at 1st July	14	5	19	11	3	14	3	3	6
Admitted	4	3	7	1	1	2	2	..	2
Discharged	6	5	11	3	..	3	1	..	1
Allowed Home Isolation	..	..	..	5	..	5	1	..	1
Died	1	..	1	1	1	2	..	..	..
Population at 30th June	11	3	*14	3	3	*6	3	3	*6

*These totals include three patients given special permission to remain in hospital although eligible for discharge.

ADMISSIONS

Both admissions during the year were male patients from North Queensland, both were over fifty years of age and both showed moderate advancement of the disease.

RELEASES

(a) *Discharges*.—One male patient was discharged after having obtained twelve consecutive negative smears. He was clinically well.

(b) *Home Isolation*.—One male patient was allowed home isolation after having shown excellent clinical and bacteriological progress. He has continued to make satisfactory progress since. As at 30th June, 1961, seven (7) persons are maintained on isolation in their own homes. This scheme has worked well, and all have continued to make excellent progress.

DRUG TREATMENT

Basic drug treatment remains as in previous years, with Dapsone at the principal specific drug in use. In addition to Dapsone, Etisul is used by some patients with good results.

Early in 1961 one patient was treated with a combination of Dapsone, Etisul, and Methimazole with quite remarkable results. This patient had been admitted in November, 1960, with anaesthesia of the hands, forearms, and feet; pigmentation and infiltration of the hands, arms, feet, legs, face, and a small area of the anterior chest; bilateral foot-drop; and muscle wasting of the hands. After only a few weeks on this combined treatment the foot-drop had disappeared, pigmentation began to fade rapidly and the anaesthetic changes began to reverse. Progress has continued to the point where casual observation would fail to detect anything amiss with this patient and *M. leprae* have become extremely scanty in his smears.

This line of treatment appears promising and will be investigated further. With this combination of toxic drugs, however, frequent blood examinations are essential. Methimazole is currently attracting much attention overseas.

GENERAL

The housing of patients in an annexe to a large hospital has resulted in much benefit to them but in addition it has provided a means of temporarily accommodating ex-patients for short periods so that foot ulcers and other conditions requiring in-patient treatment can be attended to. During the year five ex-patients were admitted for short periods for various reasons, two of them being admitted on two occasions each

In addition to in-patient facilities, an out-patient clinic is conducted at the ward each Tuesday morning for ex-patients who are attending in increasing numbers as they get to know of this facility. Twenty-six ex-patients availed themselves of this service, most of them attending frequently to obtain advice and drugs and to have follow-up smears taken.

The Red Cross Society continues to provide handcraft materials and instruction for those patients capable of engaging in this form of occupational therapy. Leather and plastic appear to be the most popular materials with the patients.

From time to time medical practitioners and medical students have taken the opportunity of visiting the annexe to gain some knowledge of Hansen's disease and arrangements are made with the Professor of Medicine in the University of Queensland to demonstrate cases to final year students.

(2) HANSEN'S DISEASE IN THE COLOURED POPULATION

Coloured patients with Hansen's disease are isolated at Fantome Island, one of the Palm Island Group, some forty miles by sea north of Townsville and about twelve miles east of Rollingsstone.

The following Table shows the population remained stationery during the year:—

TABLE XIX			
—	Males	Females	Total
Patients at 1st July, 1960 ..	13	4	17
Admitted	1	..	1
Discharged	1	..	1
Patients at 30th June, 1961 ..	13	4	17

This has been a very quite year at Fantome Island with only one discharge and one re-admission of a patient with minimal re-activation of his Hansen's disease.

The substantial reduction in cases being admitted from the coloured population parallels the position in the white population and the credit must go to the policy of selective isolation and vigorous treatment with modern drugs.

As in previous years the nursing and general care of the coloured patients is in the capable hands of the Franciscan Missionaries of Mary and credit must also go to Medical Officers of the Townsville Hospital for the medical care of the patients. Specialist treatment was given to patients at Townsville General Hospital on a number of occasions.

SECTION OF ENTHETIC DISEASES

Medical Officer in Charge: GEOFFREY HAYES, M.B., Ch.M. (Syd.)

There were 1,436 cases of venereal disease notified for the 1960-61 fiscal year. This compares with 1,021 in the previous year and represents an incidence of 0·977 per thousand population as compared with 0·705 per thousand in the previous year.

This represents an actual increase in the rate of incidence of 38½ per cent. over the previous twelve months and also represents the highest incidence since the war and immediate post-war years, when there were many thousands of troops in Queensland. This increase is general and not due to any “pockets” of more meticulous notification. Various centres outside Brisbane from Thursday Island southwards all show increases in their notification.

This recrudesence of venereal disease is world-wide and has been the subject of editorial comment in many medical journals during the past twelve months. The lowest ebb in Queensland was in 1951-52 when the incidence was 0·506 per thousand, so the present incidence represents a 94 per cent. increase in the venereal disease rate since then.

In addition to these notified forms of venereal disease there is also an ever-increasing number of cases of non-specific urethritis seeking treatment but these are not notifiable.

Table XX. dissects the incidence of notified venereal disease for the past twelve months.

TABLE XX
NOTIFIED VENEREAL DISEASES IN QUEENSLAND, 1960-61

						Metropolitan		Outside Centres		Whole State		Total
						Males	Females	Males	Females	Males	Females	
Gonorrhoea—												
Unspecified	..	..	..	..	..	..	..	3	..	3	..	3
Acute	..	..	..	..	..	831	93	188	36	1,019	129	1,148
Sub-acute	..	..	..	..	..	1	2	1	6	2	8	10
Chronic	..	..	..	..	..	..	7	5	24	5	31	36
Ophthalmia	..	..	..	..	..	2	..	..	..	2	..	2
Vulvo-vaginitis	..	..	..	..	..	..	2	..	1	..	3	3
						834	104	197	67	1,031	171	1,202
Syphilis—												
Unspecified	..	..	..	..	..	..	1	1	1	1	2	3
Primary	..	..	..	..	..	27	8	12	3	39	11	50
Secondary	..	..	..	..	..	10	9	4	2	14	11	25
Tertiary	..	..	..	..	..	2	1	2	1	4	2	6
Latent	..	..	..	..	..	3	1	..	5	3	6	9
Neuro	..	..	..	..	..	2	..	2	..	4	..	4
Pre-natal (congenital)	..	..	..	..	..	1	..	..	..	1	..	1
						45	20	21	12	66	32	98
Soft sore	..	..	..	..	..	10	..	4	..	14	..	14
Venereal warts	..	..	..	..	..	117	..	1	..	118	..	118
Ulcerative granuloma	..	..	..	..	..	..	..	1	3	1	3	4
						1,006	124	224	82	1,230	206	1,436
						1,130		306		1,436		
						1,436						

Table XXI. shows the centres from which notifications were received in the extra metropolitan area. It shows approximately the same distribution as last year, the five centres with the greatest numbers being still in the same order, namely—Thursday Island, Townsville, Cairns, Mackay, Mareeba, and Rockhampton.

TABLE XXI
CENTRES OF NOTIFICATION OF VENEREAL DISEASE OUTSIDE METROPOLIS

Centre	Males	Females	Total
Atherton	4	2	6
Ayr	2	0	2
Blackall	3	0	3
Boonah	1	0	1
Bundaberg	2	0	2
Cairns	29	8	37
Charleville	1	0	1
Clermont	2	1	3
Cloncurry	4	1	5
Cooktown	2	0	2
Coolangatta	0	1	1
Cunnamulla	5	3	8
Dalby	1	0	1
Edmonton	6	2	8
Eidsvold	1	0	1
Gladstone	2	0	2
Goodna	1	0	1
Goondiwindi	2	0	2
Gordonvale	6	1	7
Hughenden	2	1	3
Ingham	1	0	1
Innisfail	2	0	2
Ipswich	1	0	1
Julia Creek	3	0	3
Kingaroy	1	1	2
Longreach	3	0	3
Mackay	10	3	13
Mareeba	12	0	12
Maryborough	3	0	3
Monto	1	0	1
Mount Isa	1	0	1
Murgon	1	0	1
Redcliffe	1	0	1
Rockhampton	9	2	11
Southport	1	0	1
St. George	2	0	2
Thursday Island	46	37	83
Townsville	45	13	58
Tully	1	1	2
Winton	2	2	4
Wondai	2	2	4
Yeppoon	1	0	1
	224	82	306
	306		

Table XXII. shows the varying incidence since the immediate pre-war years and the steady increase over the past nine years to which reference has already been made.

TABLE XXII
SHOWING NUMBER OF NOTIFICATIONS OF VENEREAL DISEASES FOR PAST 23 YEARS

Fiscal Year	Notifi- cations	Mean Population	Incidence per 1,000 Popula- tion
1938-39	1,147	1,008,207	1.127
1939-40	1,091	1,021,426	1.077
1940-41	1,328	1,032,122	1.286
1941-42	1,207	1,036,690	1.164
1942-43	3,101	1,040,433	2.98
1943-44	2,718	1,054,810	2.576
1944-45	2,391	1,068,630	2.24
1945-46	1,309	1,084,125	1.207
1946-47	1,373	1,097,303	1.251
1947-48	1,000	1,114,634	.897
1948-49	846	1,140,816	.742
1949-50	731	1,173,232	.623
1950-51	626	1,207,194	.519
1951-52	627	1,239,868	.506
1952-53	757	1,272,244	.595
1953-54	740	1,300,464	.569
1954-55	741	1,325,336	.559
1955-56	807	1,352,650	.597
1956-57	995	1,380,700	.721
1957-58	1,018	1,403,400	.726
1958-59	965	1,426,019	.676
1959-60	1,021	1,448,100	.705
1960-61	1,436	1,468,400 ^r	.977

(^r) Subject to revision.

Tables XXIII., XXIV., and XXV. show alleged sources of infection, marital status and age groups of notified cases.

TABLE XXIII

ALLEGED SOURCES OF INFECTION				
Non-professional	..	..	..	1,125
Not stated	..	..	..	124
Unknown	..	..	..	119
Professional	..	..	..	59
Husband	..	..	..	6
Wife	..	..	..	3
Total	..	..	..	1,436

TABLE XXIV

MARITAL STATUS OF PATIENTS			
—	Males	Females	Total
Single	1,025	117	1,142
Married	149	69	218
Separated	29	12	41
Widowed	23	4	27
Divorced	1	4	5
Not Stated	3	0	3
Total	1,230	206	1,436

TABLE XXV

SHOWING AGE GROUPS OF NOTIFIED CASES			
Age Group	Males	Females	Total
Under 1 year	3	..	3
1-5 years	2	..	2
6-10 years	..	3	3
11-15 years	..	6	6
16-20 years	430	81	511
21-25 years	313	29	342
26-30 years	167	37	204
31-35 years	101	16	117
36-40 years	75	9	84
41-45 years	50	8	58
46-50 years	41	4	45
51-55 years	13	2	15
56-60 years	8	..	8
61-65 years	3	..	3
Over 65 years	4	2	6
Not Stated	20	9	29
Total	1,230	206	1,436
	1,436		

Table XXVI. shows the sources from whence notifications were received, 11.8 per cent. coming from private practitioners as compared with 12.4 per cent. last year. It is generally agreed that many cases treated privately are not notified so that the real incidence of venereal disease must be substantially greater than the official figures indicate. This understatement of privately treated cases, of course, is not peculiar to Queensland.

TABLE XXVI
SHOWING SOURCES OF NOTIFICATION

—	Males	Females	Total
Private Doctors—			
Brisbane	34	12	46
Outside Centres	99	23	112
Total	133	35	168
Clinics—			
Brisbane	941	102	1,043
Outside Centres	26	8	34
Total	967	110	1,077
Hospitals—			
Brisbane	31	10	41
Outside Centres	99	51	150
Total	130	61	191
Total all sources	1,230	206	1,436
	1,436		

The big increase in venereal disease, still by far the most prevalent of all the infectious diseases, calls for comment. All others are declining in incidence whereas the venereal diseases are steadily increasing. The disturbing feature is the greater number of teenage girls who have been reported. This is the result of the increase in promiscuity associated with increased delinquency which is occurring throughout the world.

Fortunately the late results of neglected venereal disease are to some extent easier to rectify these days in so far as gonorrhoea and syphilis are concerned but we do not know to what extent non-specific urethritis may be the fore-runner of seemingly remote and unrelated conditions as so little is known of its aetiology. In recent years low back pain and sacroileitis have been shown to be associated with Reiter's syndrome, and prostatomegaly arises often from adenomas which have developed from the posterior urethral glands, the site of many non-specific urethritis infections. The development of tabes or aneurism from a genital sore seemed far-fetched at one time.

Opportunities for research are many in a venereal disease clinic. Every encouragement should be given to attract younger men to this specialty.

One cannot do better perhaps than to quote from a recent article in the "Lancet" by Ambrose King, F.R.C.S., Senior Physician at the Whitechapel Clinic, who states:—

"It seems that although the venereal diseases are certainly not dying, there is a danger of the decline of Venereology. The combination of thriving diseases and the disappearance of those whose special study they are, has obvious dangers for the public health.

It seems essential that the structure of the venereal disease services should be maintained. The first step is to correct those who have falsely interpreted the post-war decline and a new remedy as the end of a major problem. . . Gonorrhoea threatens again to become very serious and solution of the major problem of non-specific genital infection is not in sight. . ."

VENEREAL DISEASE CLINICS

Confidential treatment of venereal disease is provided at every public hospital in the State. In Brisbane most cases are referred to special clinics, Colchester Street for males and William Street for females. In addition, all prisoners are routinely examined and, if venereal disease is discovered, are treated whilst in detention.

The following is a summary of activities at the male and female clinics and included in the latter are notifications from the Women's Prison.

Male Clinic—Colchester Street

New Cases—				
Total for the year	..	..	..	1,432
Highest Month—February	..	..	..	154
Lowest Month—November	..	..	..	91
(Average per month)	..	..	..	119.3
Visits—				
Total for the year	..	..	..	10,853
Highest Month—February	..	..	..	1,051
Lowest Month—April	..	..	..	740
(Average per Month)	..	..	..	904.416
Notifications—				
Early Syphilis—				
Primary	..	..	..	24
Early Secondary	..	..	..	7
Early Latent	..	..	..	2
Total	..	..	..	33

Notification—continued

Late Syphilis—				
Nil	..	..	..	0
Acute Gonorrhoea	..	..	..	779
Veneral Warts	..	..	..	117
Soft Sore	..	..	..	10
Total	..	..	..	939
Injections—				
Penicillin	..	..	..	1,147
Bismol	..	..	..	5
Total	..	..	..	1,152
Investigations—				
Dark Ground tests	..	..	..	62
Smears examined at Clinic	..	..	..	5,846
Smears submitted to Laboratory	..	..	..	1,041
Blood tests submitted to Laboratory	..	..	..	1,978
Total	..	..	..	8,927
Prophylactic Treatments	..	..	..	1,289

Women's Clinic—William Street—Summary of Activities
NOTIFICATIONS

—	Women's Clinic	H.M. Prison	Prostitutes	Total
Gonorrhoea—				
Acute ..	74	6	4	84
Chronic ..	6	1	..	7
Treated ..	1	..	..	1
	81	7	4	92
Syphilis—				
Primary ..	3	..	..	3
Secondary ..	..	3	..	3
Latent ..	..	1	..	1
Tertiary ..	1	..	..	1
Treated ..	2	..	..	2
	6	4	..	10
Total ..	..	..	..	102

OTHER ACTIVITIES

—	Women's Clinic	Her Majesty's Prison
Total Interviews	493	..
New Cases	200	..
Notifications	102	..
Penicillin Injections	151	24
Smears taken	608	260
Cultures taken	270	..
P + S cultured	132	..
Bloods taken	221	125
Prisoners examined	..	130

SECTION OF FOOD AND DRUGS

This section carried out all its duties under the relevant sections of the Health Acts, and Regulations made thereunder.

Close attention was paid to the quality of milk sold throughout the State, with particular emphasis being placed on the products of pasteurising and bottling plants. These plants supply by far the major portion of the milk consumed in the State and it is pleasing to report that the standard has been generally found to be high. Two new pasteurising factories were opened during the year. As a result of sampling activities, seven prosecutions for the sale of adulterated milk (six with water and one for milk fat deficiency) were successfully launched, resulting in £108 in fines and £24 17s. in costs.

The meat trade was not overlooked and an intensive campaign was waged throughout the State. As a result of sampling and analysis, eighty-five (85) prosecutions for the sale of minced meat, adulterated with sulphur dioxide, were successfully undertaken. Fines totalled £792, with costs of £247 6s. Nine successful prosecutions in regard to excess preservative or deficiency in the prescribed standard for meat content of sausages were taken, resulting in £85 10s. in fines and £26 5s. in costs.

Flours produced by the millers were regularly tested, whilst a large number of samples of bread from all over the State were checked. Where deficiencies in the standard were found, the breaches were strongly brought to the notice of the bakers concerned, and any failure to comply, when the subsequent legal samples were taken, resulted in their prosecution. £36 in fines and £11 11s. costs were obtained for four successful prosecutions for these breaches.

Licensed premises, including hotels, clubs and booths, were under constant scrutiny during the year and £75, together with £8 8s. costs were secured as the result of three prosecutions for the sale of adulterated liquor. Very close attention was paid to glass-washing facilities at licensed premises, with much improvement, whilst persons detected committing breaches of the regulation which required the provision of a clean glass for each drink, were prosecuted. As a result of twenty prosecutions, revenue benefited by the sum of £75 in fines and £25 11s. in costs. Other cases are pending.

Our two officers at the Fish Market carried out their duties efficiently and, 15 tons 14 cwt. of fish, together with 1,877 crabs, 14 cartons of lobsters and 89 bottles of oysters were found unfit for human consumption and destroyed. Officers in other parts of the State found over 15 cwt. of fish and 65 crabs to be unfit for human consumption. They seized and destroyed them.

Food factories generally were kept under scrutiny and it is pleasing to report, not only the construction of new factories of good modern design, but also decided improvement

in existing factories. Samples of products have been checked and defects in standards or labelling corrected. Particularly was this so in regard to soft drinks.

Labelling is a very important requirement for food products and this aspect of the work has not been neglected. Fortunately, a good spirit of co-operation exists between the trade and this Department and it has been possible for the staff to secure beneficial results.

All complaints from the public, in respect of quality of foods and conditions of premises, met with prompt investigation and necessary action was taken to correct breaches. In some instances, prosecution of offenders was found necessary.

A close watch was kept on the quality of food for sale at all points of distribution and sale. As a result, over 63 tons of various foodstuffs were found unfit for human consumption and their safe disposal effected.

In addition, 12,558 cigarettes, 329 bottles of champagne, 7 gallons of brandy and 4 bottles of whisky, together with a quantity of beer, confectionery and tobacco were found to be adulterated and their destruction supervised.

Prosecutions for miscellaneous offences were successfully launched in 13 instances, with the securing of £102 in fines and £34 6s. in costs.

POISONS AND DRUGS

The ever-increasing number of poisons, insecticides and drugs on the market imposed a heavy burden on the staff, and every effort was made to ensure proper packing and labelling, and to see that they were sold through the proper channels. Officers of this Section continually made inspections of premises of licensed dealers in poisons and of chemists, whilst the handling of drugs at hospitals and institutions was continually under scrutiny. Professional men, such as doctors, dentists and veterinary surgeons, were not neglected, investigations being made to ensure full compliance with the regulations.

The highly toxic poison, cyanide, has much use industrially and, as far as possible, all premises where cyanide is used, have been visited to ensure the proper and safe keeping of the poison, and a proper recording of its uses.

Altogether, it has been a busy year as, apart from necessary inspections, attention has been given to advertising of drugs, and false, extravagant and offending claims have been dealt with. As with labelling defects, most of our troubles in regard to advertising come from other States. However, it is anticipated that steps now being taken on an interstate level will greatly ameliorate the position.

During the year two prosecutions for the unauthorised possession of restricted drugs were successfully undertaken with the obtaining of £30 in fines and £16 2s. in costs.

SECTION OF ENVIRONMENTAL SANITATION

Environmental sanitation is primarily the responsibility of the Local Authorities through their health inspectors with officers of the Health Department exercising a supervisory role.

The distribution of Local Authority inspectors is as follows:—

Brisbane City Council	40
Cities and Towns	45
Shires (not in joint areas)	34
Joint Areas (more than one Local Authority)	29
Total	148

This is an increase of four over the previous year.

The only vacancies existing were those which normally occur and it is not expected that the Local Authorities concerned will experience any difficulty in obtaining the services of qualified men.

NIGHTSOIL DISPOSAL AND REMOVAL

In many parts of the State the pan system is still in operation and generally is well carried out. Sewerage is the most effective and safest means of removing the wastes of a community and it is pleasing to know that this is realised by Local Authorities which have not installed sewerage. Many are investigating the possibility of doing so but the availability of finance will be the governing factor.

REFUSE COLLECTION, REMOVAL, AND DISPOSAL

The collection and removal of refuse is usually carried out efficiently by Local Authorities or contractors. There are still some Local Authorities which require the householder to place the refuse bin at the front of the premises for speedy handling by the collectors. This practice can, and does, lead to the refuse remaining on some premises for longer than the seven days prescribed by "The Plague Prevention Regulations of 1958." The occupier of the premises does at times forget to place the refuse bin at the appointed place and, in any case, invalids and aged persons living alone cannot be expected

to place the bin at the appointed place. It is recommended that Local Authorities which require this should review this requirement in the interests of the health of the people of their area.

It is not uncommon to find uncovered refuse in which flies and rats can and do breed prolifically in some Local Authority areas. It is recommended that covering material should be stockpiled with the aid of mechanical equipment so that it will be available at the end of the day to cover the refuse.

RODENT CONTROL

Most Local Authorities, by attention to the ratproofing of buildings and the provision of rat baits to householders and the employment of rodent control officers, control the rat population of their areas. Table XXVII shows the number of rodents killed.

TABLE XXVII
SHOWING NUMBER OF RODENTS DESTROYED IN
COASTAL CITIES

City	Rats	Mice
Brisbane	41,144	3,837
Bundaberg	403	..
Cairns	1,630	349
Gympie	153	..
Ipswich	848	..
Mackay	1,493	763
Maryborough	387	..
Rockhampton	676	..
Townsville	1,632	..
Total	48,366	4,949
Total all rodents 1960-61	..	53,315
Total all rodents 1959-60	..	59,532
Total all rodents 1958-59	..	56,572

MOSQUITO ERADICATION

Local Authorities have continued their control measures by spraying with larvicides the larger known breeding places. Some have taken advantage of the subsidy paid by the Government on works which are of a permanent nature, that is, works designed to permanently remove breeding places. Table XXVIII shows the subsidies paid during the year under review.

TABLE XXVIII
STATEMENT SHOWING TREASURY SUBSIDIES GRANTED
TO LOCAL AUTHORITIES FOR MOSQUITO
ERADICATION PURPOSES DURING THE
FINANCIAL YEAR, 1960-61

Local Authority					Amount
					£
Brisbane City Council	..	..	..		109,975
Cairns City Council	..	..	..		25,192
Gold Coast City Council	..	..	..		2,442
Gympie City Council	..	..	..		1,885
Redcliffe City Council	..	..	..		21,500
Toowoomba City Council	..	..	..		5,755
Bowen Shire Council	..	..	..		65
Burrum Shire Council	..	..	..		3,925
Johnstone Shire Council	..	..	..		41
Maroochy Shire Council	..	..	..		1,000
Mulgrave Shire Council	..	..	..		100
Total	..	..	..	£	171,880

CAMPING AREAS AND SEASIDE RESORTS

Departmental officers have made inspections at the camping areas throughout the State, particularly those at seaside resorts over the Christmas-New Year holiday period. Their reports indicate that generally the Local Authorities supervise these places very satisfactorily.

WATER SAMPLING

Two hundred and forty-three samples were received for chemical examination and 402 for bacteriological examination.

Many of the small centres have water supply undertakings but, because of the high cost of water treatment plants and, in many instances, the costs of operating such treatment plants, these supplies are not treated.

Officers of the Department have commenced a survey of the Brisbane River in respect of the dissolved oxygen. Three points have been fixed—William Taylor Bridge, William Jolly Bridge, and a line from Bulimba to Hamilton. Once a month, six (6) samples are taken, one from just below the surface, one from just above the bottom, at each bank and centre of the river.

The information on the dissolved oxygen in the water is a fair index of the pollution which is occurring, and the survey is continuing. Table XXIX gives the results of the analyses to hand to 30th June, 1961.

TABLE XXIX
DISSOLVED OXYGEN—BRISBANE RIVER EXPRESSED IN PARTS PER MILLION

Month Sample Taken		William Taylor Bridge			William Jolly Bridge			Hamilton		
		North Bank	Middle	South Bank	North Bank	Middle	South Bank	North Bank	Middle	South Bank
October, 1960	Top	5.1	5.2	5.4	4.1	4.1	4.15	2.9	3.1	2.9
	Bottom	7.5	7.6	5.7	6.5	8.2	5.4	3.55	7.0	3.25
November, 1960	Top	4.9	4.95	4.8	4.3	4.3	4.2	5.2	5.25	4.0
	Bottom	5.4	9.7	5.2	6.4	8.2	5.8	4.5	7.55	4.25
December, 1960	Top	4.8	4.9	4.85	4.1	4.1	4.2	3.85	3.7	3.6
	Bottom	5.4	6.15	5.35	4.15	4.55	4.25	4.95	5.5	3.5
February, 1961	Top	5.6	5.5	5.45	4.1	4.15	4.05	3.9	3.75	3.9
	Bottom	6.95	5.9	5.85	6.1	4.3	4.4	4.4	5.0	4.25
March, 1961	Top	4.05	4.3	4.2	3.15	4.05	3.7	4.55	4.45	4.95
	Bottom	4.75	6.3	5.1	6.3	..	..	5.75	7.05	4.45
April, 1961	Top	6.25	5.9	6.2	4.7	4.35	4.7	4.3	4.45	4.65
	Bottom	6.9	8.65	6.3	7.25	8.5	6.2	7.15	7.45	5.55
May, 1961	Top	6.75	6.55	6.65	5.1	5.15	4.9	4.55	4.8	4.2
	Bottom	7.7	9.15	6.7	6.5	8.45	6.25	4.4	6.65	4.3
June, 1961	Top	5.7	6.7	6.8	4.8	4.9	4.9	..	..	..
	Bottom	6.6	6.1	6.6	5.8	8.8	6.2	..	..	..

PAINT

In order to check the application of lead paint to houses, officers through the State have taken samples of paint from the “pot,” that is, samples of the paint from the pot from which the painter was applying paint. It is pleasing to report that of 89 such legal samples and 9 non-legal samples obtained in this way, all the results of analyses so far reported show that the paint being used has been free of lead.

When cases of lead poisoning in children are reported or when we understand that red lead has been used as a priming coat, officers visit the premises concerned and scrape off samples of paint to ascertain the extent of any lead paint. Five hundred and twenty-eight legal and 89 non-legal samples have been so removed. As a result the owners of 101 premises have been requested to remove paint containing lead from all or parts of the premises. To date, 54 such requests have been complied with. In all cases a reasonable time is allowed and it is unusual for anyone not to remove the paint.

TOYS

The inspection and sampling of toys as a possible source of lead in children has continued. Two hundred and fifty-nine legal and 31 non-legal samples of toys were submitted for analysis throughout the year. Of these, 175 legal and 10 non-legal samples were found to contain lead, mainly in the paint on the toys.

As a result of these findings, 3,375 toys were placed under seal. By far the greater part of this total was made up of a particular type of wooden toy from overseas. The wholesalers eventually undertook to recover stocks they had distributed and these, together with those under seal, were sold outside the State. Retailers and wholesalers have co-operated in an agreement which it is hoped will prevent any “leaded” toys coming on to the Queensland market.

Other activities included inspection of hotel premises, footwear, swimming pools, and barbers’ shops.

SECTION OF HOOKWORM CONTROL

Two health inspectors stationed at Cairns have been employed during the year on hookworm control in North Queensland.

They have made hookworm surveys in portion of the Torres Strait Islands Church Missions and Government settlements on Cape York Peninsula and adjacent to Cairns, and at schools and other establishments.

These surveys include the examination of faeces for hookworm ova and the inspection of sanitary conveniences and the disposal of nightsoil.

Treatment is given to those found to be infested and re-examination of faecal specimens is done later to determine the number cured.

Unfortunately the sanitation and personal habits of many of the patients, who are mainly aboriginals, permit re-infestations so that it is impossible to state the number or percentage of actual "cures."

Of the 6,828 specimens examined 1,017 were found to contain hookworm ova. This number includes re-examinations of those on whom the treatment given had not been completely successful and some who had been cured but become re-infested.

Until the sanitation is improved this is likely to be the position for some time. The main difficulty is to educate the older aboriginals in good sanitary practices.

In addition to the surveys mentioned above an officer from Brisbane made surveys at Woorabinda and Cherbourg Aboriginal Settlements.

At Woorabinda 24 persons were found to be positive from 339 examined. As sanitation is good at this settlement these were treated with "Alcopar" and a re-examination later showed them to be all cured.

At Cherbourg, where sewerage exists, the first survey showed 7 positive cases from 679 persons examined. A subsequent survey showed 6 of the original 7 to have been cured and another positive case was found. These were treated with "Alcopar" but re-examinations have yet to be made.

Although the sanitation at each of these settlements is good and it is not expected that re-infestation will occur there, the surveys will continue to detect those who may be infested outside the settlements.

DIVISION OF TUBERCULOSIS

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BUILDING

As recorded in the Annual Report 1959-60 plans have been approved to considerably enlarge the Chest Clinic in Brisbane. However, it has been increasingly obvious that the existing congested Chest Clinic is not adequate for present needs, let alone for expansion of Chest Clinic services or for a headquarters from which a compulsory X-ray survey of the Brisbane City area can be undertaken. Approval has therefore been given for moving the Chest Clinic to larger temporary accommodation pending the building of the new Health and Welfare Building in George Street.

Plans for the renovation of part of the old Lady Bowen Hospital, Wickham Terrace, at an estimated cost of £40,000, have been approved and it is anticipated that the necessary work will be speedily accomplished. This will enable the campaign against tuberculosis in Queensland to be conducted more widely and vigorously because the overcrowding will be eliminated and it will be possible to increase the staff and extend the activities of the Clinic.

The erection of a Tuberculosis Annexe at the Toowoomba Mental Hospital for patients from mental institutions who are found to be suffering from tuberculosis has commenced. It is hoped that the unit will be completed about June, 1962.

GENERAL

In all areas of the State there is an increasing awareness on the part of the public and doctors of the vital part played by a Tuberculosis and Chest Clinic service. Because of this the number of individuals presenting themselves for routine chest X-ray examination is constantly increasing and patients are referred by doctors for examination and investigation in greater numbers. Even in spite of this there are still too many individuals whose pulmonary tuberculosis is at a far advanced stage when they are first examined as shown in Table XXXVI.

During the year there were 767 new cases of tuberculosis notified and of these 725 were cases of pulmonary tuberculosis. Of those 725 pulmonary cases at least 11·3 per cent. had far advanced disease at the time of diagnosis and the stage of the disease was not stated on the notification form in 8 per cent. The vast majority of cases—the remaining 80·7 per cent.—had when first diagnosed either minimal or moderately advanced disease. This is to the advantage of both the patient and the community; to the patient because the disease found in the less far advanced stages is more amenable to treatment and the ultimate prognosis is much more satisfactory; to the community, because the earlier cases are found the less chance there is of spread of the disease to other members of the community. This emphasises one of the great values of compulsory mass X-ray surveys in that patients can be discovered in the first and relatively symptomless stages of the disease and early treatment instituted.

The provision of static micro chest X-ray units at certain general hospitals and the thoracic annexes has been of continued benefit because by far the majority of out-patients and inpatients at those institutions have a routine chest X-ray. There has been some resistance to chest X-ray by a few pregnant women because of various newspaper reports but the radiological hazard of a chest X-ray in these women is negligible and overseas published reports do indicate a higher incidence of active tuberculosis in pregnant women than amongst others having routine chest X-rays.

Cases of carcinoma of the lung found as a result of chest X-ray and laboratory examination (in these cases the sputum cytological tests performed at the State Laboratory of Microbiology are invaluable) continue to increase as in Table XXXVII.

That most cases of carcinoma of the lung are related mainly to cigarette smoking is no longer questioned and education of youth and the public in general on this matter is vital. As pointed out by the British Joint Tuberculosis Council there is also evidence that relapse in cases of tuberculosis is more common in those who smoke than in non-smokers.

SPECIAL ACTIVITIES

Mass X-ray Surveys

These have been continued by the static units and in particular by the compulsory chest X-ray survey mobile units. The results of these surveys are shown in Tables XXXI. and XXXII.

Some explanation is necessary of the apparently high rate of tuberculosis in the Cairns area as recorded in Table XXXII. The figure of 7·68 new active cases per 1,000 micro X-rays is not a true indication of the actual incidence of tuberculosis in the area as it is inflated by the inclusion of cases in which investigations were not complete at the time of the last Annual Report, but in which the diagnosis was subsequently confirmed. The number therefore cannot be accurately related to the total of micro films listed in Table XXXII.

A more realistic assessment of the actual incidence of tuberculosis in the Cairns Regional area can be made by—

- (i.) Totalling the compulsory X-ray survey films taken in the previous year (19,515) with the number listed in Table XXXII. (23,909) and adding the number of micro X-ray examinations carried out at Cairns Hospital 1959-1960 (3,024) and 1960-1961 (4,080). (Many individuals elected to have a chest X-ray taken at the static unit at Cairns Hospital during the compulsory X-ray survey of the area rather than at a mobile survey van.); and
- (ii.) Comparing the total thus obtained with the number of new active cases of tuberculosis found in 1959-1960 (47) plus 1960-1961 (169).

Such a comparison gives a total of 216 new cases in 50,528 micro films, or an incidence of 4·27 per thousand micro films. This figure is still high when compared with the rest of the figures so far available for Queensland but not unduly high considering that this has been the first compulsory survey in the area where are grouped individuals in rather remote communities who have not been able to avail themselves previously of the opportunity of having chest X-rays.

The number of active cases found in the Maryborough area is not yet a true indication of the incidence there either, as many of the final results of investigations in that area are still awaited.

The epidemiological pattern of tuberculosis in Queensland as in fact throughout the world, continues to present baffling problems especially in regard to the tuberculin skin test reactor rate and numbers of active cases found. The full picture is not yet apparent for Queensland and isolated findings must eventually be balanced against the final results when the figures throughout the whole of Queensland found from compulsory mass X-ray are eventually known.

The compulsory survey this year has thrown the main burden on the staff at the Brisbane Chest Clinic as the Units have been operating mostly in the areas directly under the supervision of the Brisbane Clinic. Considerable follow-up work in the Cairns and Townsville areas has also been necessary however. It is anticipated that from 25 per cent. to 30 per cent. of minimal pulmonary shadows detected for the first time by the compulsory chest X-ray survey in those areas will progress to frank active tuberculosis within the next five years and the early changes of activity will not be associated with symptoms. It is therefore imperative that all patients with such shadows should be followed by regular X-rays and occasional bacteriological tests for some years. The organisation and the carrying out of this follow-up work is proceeding in the areas which have been surveyed by the compulsory X-ray units.

X-ray survey work has also continued when possible in the Torres Straits area. Many difficulties are encountered in this area and it is to be hoped, that before long, lighter and more efficient portable X-ray equipment will be available to facilitate these surveys.

COUNTRY CLINICS

Many additional Clinics have been held in the areas covered by the compulsory X-ray surveys. The visits of Chest Clinic staff to these areas have been appreciated by patients and doctors. Local doctors have been informed of many abnormal X-ray findings in their patients which have not necessitated Chest Clinic investigation. The chest physician at the Rockhampton Thoracic Annexe has commenced regular outpatient clinics at Mackay, Mount Morgan, and Gladstone, otherwise regular country clinics are held as previously reported.

TUBERCULIN TESTING

There is not adequate information available from overseas or from Queensland to explain fully the pattern of skin sensitivity to tuberculin in Queensland. Work has been done during the year both by the Director of Tuberculosis and his staff in Brisbane prior to his illness and by the chest physicians at Toowoomba, Rockhampton, Townsville, and Cairns to help elucidate this problem. In this regard the help of the sisters attached to the Chest Clinic and the thoracic annexes has been invaluable. The cards recording these skin test results are now coming to Brisbane and will be subjected to statistical analysis.

The Deputy Director of Tuberculosis was privileged to present a paper at the recent A.N.Z.A.A.S. Congress in Brisbane dealing with some aspects of this subject and some of the clinical problems encountered in patients with atypical acid fast bacilli in their sputum. Queensland and West Australia alone among the Australian States have encountered this problem to the present time. It is thought that the epidemiological evidence suggests that the high positive reactor rate of certain Queensland school children to Old Tuberculin is a non-specific effect and not due to infection with human Mycobacterium tuberculosis but the organism or material causing this non-specific sensitisation is at present unknown.

In Brisbane some attempt has been made to assess the significance of positive skin tests with Old Tuberculin using the Heaf method by comparing them with the reaction to PPD., also given by the Heaf method. The PPD. used is a Purified Protein Derivative of Tuberculin produced from human type Mycobacterium especially for use in the Heaf method of tuberculin testing. Results are shown in Table XLII.

The results show that the reactions to PPD. are usually smaller in size than with Old Tuberculin but whether a change should be made from Old Tuberculin to PPD. for routine skin testing by the Heaf method is as yet uncertain.

In all areas routine skin testing of contacts of cases of tuberculosis has been carried out. In the case of children and contacts B.C.G. vaccination has been given where indicated. Skin testing of all children in the last grade of primary school is carried out in Brisbane and Ipswich and B.C.G. vaccination is given whenever indicated. In Cairns, Townsville, Rockhampton, and Toowoomba as many children as possible in the last primary school grade have skin tests and are offered B.C.G. vaccination. Table XLI. refers.

CHEMOTHERAPY AND TREATMENT

Treatment of cases of pulmonary tuberculosis has confirmed the importance of bed rest in hospital for active infectious cases and the necessity of adequate chemotherapy. Although the basic chemotherapy is unaltered, this year has seen the availability of a new drug—Ethionamide. This drug causes nausea in certain cases but very few serious side effects have been reported and it has been used successfully in a few cases in Brisbane when other therapy has been contra-indicated.

An extension of the treatment of cases of tuberculosis is “chemoprophylaxis” or the use of chemotherapy to prevent active tuberculosis. Children under five years with strongly positive skin tests or individuals who are known to have recently changed from negative to positive skin test can be treated with isoniazid or isoniazid and para-animo-salicylic

acid as outpatients with the confident expectation that active tuberculosis in the immediate future will be prevented. In some cases such treatment results in change of the tuberculin skin test back to negative. (See Table XLIII.)

The evaluation of these results will necessitate consideration of the length of time a skin test remains positive in the average individual without chemoprophylaxis and may be related also to the possibility of transient non-specific skin sensitivity to tuberculin in Queensland. Further investigations in this regard are in progress.

DEATH RATES

Table XXXIX. shows the fall in the death rate from tuberculosis in the last decade. This fall has been due in the main to effective chemotherapy. It is now very rare for any newly diagnosed case of pulmonary tuberculosis to die before treatment brings the disease under control and most patients with tuberculosis who die, die from causes other than their tuberculosis. There are, however, still a number of so-called “chronic” cases of pulmonary tuberculosis who have had recurrent active disease for many years and whose disease is resistant to therapy. Some of these patients will over the next few years die from tuberculosis itself but if no new problems of resistant bacilli are encountered in the meantime it would be expected that the death rate would then reach even lower levels.

The low death rate from tuberculosis, and a general increase in longevity, is related to the increased number of cases of tuberculosis on the Case Register (Table XL.). The number of cases so listed is not a reflection on the amount of active disease in the community. In fact almost all the cases listed on the Case Register are examined at least yearly and the relapse rate in those who have had modern chemotherapy is very low. It would seem that before long consideration will have to be given to maintaining a register of “active cases” which category could be arbitrarily defined as a case which has shown active disease within the previous say five or seven years. Cases inactive for that length of time could be then removed from the register of cases although they could still be followed regularly at one of the Chest Clinics.

TUBERCULOSIS ALLOWANCES

The tuberculosis allowance continues to be of great benefit to many sufferers from tuberculosis. The numbers receiving the allowance are shown in Table XLVI.

CHEST HOSPITAL, CHERMSIDE

In addition to the treatment of cases of tuberculosis the Chest Hospital is equipped to undertake all the thoracic surgery necessary and certain cardiac investigation and cardiac surgery. Full investigation and treatment of all patients found to have abnormal chest X-rays is now possible.

TABLE XXX
SHOWING NUMBER OF HOSPITAL BEDS IN QUEENSLAND
EXCLUSIVELY AVAILABLE FOR TUBERCULOSIS
PATIENTS

Chest Hospital, Chermside	..	..	..	334
Rockhampton Thoracic Annexe	..	..	..	50
Townsville Thoracic Annexe	..	..	..	60
Cairns Thoracic Annexe	..	..	..	50
Toowoomba Thoracic Annexe	..	..	..	50
Thursday Island	..	..	..	92
Repatriation Hospitals—				
Greenslopes	..	..	..	80
Kenmore	..	..	..	76
Total	..	..	..	792

TABLE XXXI
SHOWING NUMBER OF X-RAY EXAMINATIONS CARRIED OUT, 1960–1961

	Chest Clinic	Mobile Unit	North Brisbane Hospital	Princess Alexandra Hospital	Rock- hampton	Too- woomba	Cairns	Towns- ville	Thursday Island	Total
Micro Films	43,136	158,023	11,988	20,991	3,271	5,050	4,080	1,644	..	248,183
Micro Re-rays	3,823	3,054	419	652	65	129	161	169	..	8,472
Other large films	10,553	..	..	..	1,930	4,625	7,312	2,580	3,978	30,978
Total	57,512	161,077	12,407	21,643	5,266	9,804	11,553	4,393	3,978	287,633

TABLE XXXII

SHOWING RESULTS OF THE COMPULSORY MASS CHEST X-RAY SURVEY OF PERSONS OVER 14 YEARS OF AGE FROM 1ST JANUARY, 1960 TO 31ST DECEMBER, 1960

Locality	Estimated No. of Persons Over 14 Years of Age	No. of Micro- Films Taken	Number of Active Cases Found	Number of Cases Per 1,000 Micro-Films	Inactive Cases	Old Rediscovered Cases	Non-Specific Fibrosis	Heart Lesions	Carcinoma	Benign Tumour	Sarcoidosis	Bronchiectasis	No Significant Abnormality After Investigation	Pneumoconiosis	Intercurrent or Pneumonic	Other Lung Conditions	Under Investigation
Balance of Cairns Regional Area	25,208	23,909	169*	7.68*	392	1	253	271	12	2	1	23	158	40	31	55	4
Townsville Regional Area	76,213	78,205	176	2.25	633	69	440	484	17	10	1	80	1,015	103	52	392	11
Brisbane Regional Area	60,452	55,909	25†	0.45†	243	8	293	230	11	9	..	40	350	22	54	202	129
	161,873	158,023	370	2.34	1,268	78	986	985	40	21	2	143	1,523	165	137	649	144

* Includes patients recalled from Compulsory Survey in 1959 for whom investigation was not completed until 1960.

† Does not include cases found after investigation completed in 1961.

TABLE XXXIII

SHOWING SOURCES OF NOTIFICATIONS OF TUBERCULOSIS,
1959-1960/1960-1961

	1959-1960	1960-1961
Hospitals	145	144
Chest Clinic	456	404
Private Practitioners	85	58
Death Certificates	..	..
Sanatoria	49	90
Repatriation Department	39	54
Thursday Island Hospital	4	10
Post Mortem	9	3
Cherbourg Aboriginal Settlement	..	1
Palm Island Aboriginal Settlement	..	1
Not Stated	..	2
	787	767

M.—Males; F.—Females; P.—Persons.

**Represents net increase after deaths and other removals from Register.

TABLE XXXIV

SHOWING INFORMATION FROM CASE REGISTER, 1960-61

	Brisbane			Country			State		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Notifications, 1960-61	236	67	303	349	115	464	585	182	767
Cases on Register 1-7-60 and	2,036	1,174	3,210	2,258	1,181	3,439	4,294	2,355	6,649
still on Register	210	62	272	332	110	442	542	172	714
**Cases added to Register	2,246	1,236	3,482	2,590	1,291	3,881	4,836	2,527	7,363
1960-61									
On Register 30th June, 1961									

TABLE XXXV
SHOWING BACTERIOLOGICAL STATUS OF PATIENTS WHEN NOTIFIED
1-7-1960 to 30-6-1961

											Brisbane	Country	State
Pulmonary—													
Positive—													
Smear	..	..	..	..	..	..	..	..	..	..	80	64	144
Culture	..	..	..	..	..	..	..	..	..	..	63	121	184
Animal Inoculation	..	..	..	..	..	..	..	..	..	..	18	18	36
Negative—													
Smear	..	..	..	..	..	..	..	..	..	..	11	24	35
Culture	..	..	..	..	..	..	..	..	..	..	7	83	90
Animal Inoculation	..	..	..	..	..	..	..	..	..	..	5	2	7
Not Stated—Results Pending											97	129	226
Death Notifications											2	1	3
Total Pulmonary											283	442	725
Non-Pulmonary—													
Positive	..	..	..	..	..	..	..	..	..	..	6	3	9
Negative	..	..	..	..	..	..	..	..	..	..	2	4	6
Not Stated	..	..	..	..	..	..	..	..	..	..	14	16	30
Death	..	..	..	..	..	..	..	..	..	..	1	2	3
Total Non-Pulmonary											23	25	48
Total All Forms											306	467	773*

*Includes 6 Cases of both Pulmonary and Non Pulmonary Tuberculosis.

TABLE XXXVI

STAGE OF DISEASE IN NEW NOTIFICATIONS OF PULMONARY TUBERCULOSIS, 1960-1961

Minimal Disease	..	..	..	..	..	273
Moderately Advanced Disease	..	..	..	..	..	311
Far Advanced Disease	..	..	..	..	..	82
Not Stated	..	..	..	..	..	59
Total	..	..	..	..	..	725

TABLE XXXVII

NUMBER OF NEW CASES OF CARCINOMA OF THE LUNG SEEN AT THE CHEST CLINIC, BRISBANE

1st July, 1958 to 30th June, 1959	..	56
1st July, 1959 to 30th June, 1960	..	65
1st July, 1960 to 30th June, 1961	..	83

TABLE XXXVIII

SHOWING DETAILS OF TUBERCULOSIS IN MIGRANTS, QUEENSLAND

—	British			Non-British			Total		
	M.	F.	P.	M.	F.	P.	M.	F.	P.
Cases prior to 1st July, 1960	190	97	287	266	120	386	456	217	673
Cases, 1st July, 1960, to 30th June, 1961	12	8	20	26	12	38	38	20	58
Total	202	105	307	292	132	424	494	237	731

M.—Males; F.—Females; P.—Persons.

M.—Males; F.—Females; P.—Persons.

TABLE XXXIX

SHOWING NUMBER OF DEATHS FROM TUBERCULOSIS AND DEATH RATE FROM TUBERCULOSIS (PER 100,000 MEAN POPULATION), QUEENSLAND

Year	Deaths	Death Rate
1950	236	19.8
1951	226	18.4
1952	216	17.2
1953	162	12.6
1954	140	10.6
1955	137	10.2
1956	81	5.7
1957	92	6.6
1958	83	5.9
1959	78	5.4
1960	83	5.7

TABLE XL

SHOWING NUMBER OF CASES ON REGISTER AND PREVALENCE RATE (PER 100,000 POPULATION), QUEENSLAND *

Year Ending	Cases on Register	Prevalence Rate
30th June, 1952	1,942	154
30th June, 1953	2,569	198
30th June, 1954	3,201	243
30th June, 1955	3,746	279
30th June, 1956	4,263	311
30th June, 1957	4,731	343
30th June, 1958	5,371	378
30th June, 1959	5,983	398
30th June, 1960	6,702	462
30th June, 1961	7,363	505

* Total known cases on register per 100,000 population.

TABLE XLI
SHOWING TUBERCULIN TESTS AND B.C.G. VACCINATIONS, 1960-61

—	Tuber- culin Tests	Did Not Return		Positive		Positive After Previous B.C.G.		Negative		B.C.G. Given*		B.C.G. Not Given		Refused B.C.G. Vaccination	
	No.	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Chest Clinic	5,735	218	3·8	1,102	20·0	1,680	30·4	2,735	49·6	1,310	47·9	1,297	47·4	128	4·7
Schools—															
Brisbane	9,917	132	1·3	2,151	22·0	612	6·2	7,022	71·8	6,936	98·8	..	..	86	1·2
Ipswich	831	7	0·8	151	18·3	36	4·4	637	77·3	633	99·4	..	..	4	0·6
Yeronga Infants' School (Special Survey)	28	..	..	3	10·7	..	..	25	89·3	..	..	..	..	..	..
Teachers' Training College	901	..	..	314	34·9	422	46·8	165	18·3	149	90·3	..	..	16	9·7
University	148	2	1·3	70	48·0	52	35·6	24	16·4	23	95·8	..	..	1	4·2
Ipswich Mental Hospital	741	16	2·0	580	80·0	..	..	145	20·0	145	100·0	..	..	..	..
Thursday Island	1,634	135	2·3	734	49·0	149	9·9	616	41·1	802†	97·4	16	2·6	..	..
Cairns‡	5,132	294	5·7	1,835	37·9	745	15·4	2,258	46·7	2,221†	..	141	6·2	14	0·6
Townsville‡	1,627	64	3·9	985	63·0	..	..	578	37·0	488	84·4	84	14·5	6	1·1
Rockhampton‡	2,378	52	2·1	898	38·6	131	5·6	1,297	55·8	1,236	95·3	31	2·4	30	2·3
Woorabinda Aboriginal Settlement ..	50	..	..	23	46·0	..	..	27	54·0	27	100·0	..	..	..	..
Toowoomba‡	6,538	151	2·3	3,015	47·2	518	8·1	2,854	44·7	2,638	92·4	68	2·4	148	5·2
Total	35,660	1,071	3·0	11,861	34·3	4,345	12·6	18,383	53·1	16,603	..	1,637	..	433	..

* Use of B.C.G. in young children is not advised in absence of contact.
† Includes aboriginal children given B.C.G. Vaccination without just having been Mantoux Tested.
‡ Includes tests performed on children in final grade of primary schools in the area.

TABLE XLII
COMPARISON OF P.P.D. AND OLD TUBERCULIN HEAF TESTS

Heaf Test Using Undiluted Old Tuberculin		Heaf Test Using P.P.D.				
		Negative	Positive			
			Grade 1	Grade 2	Grade 3	Grade 4
Negative	429	422	7	..	..	..
Positive						
Grade 1	218	67	127	23	1	..
Grade 2	255	33	112	103	7	..
Grade 3	159	5	30	77	45	2
Grade 4	46	..	..	4	16	26
Totals	1,107	527	276	207	69	28

TABLE XLIII
SKIN TEST RESULTS IN CHILDREN BEFORE AND AFTER CHEMOPROPHYLAXIS

Positive Skin Test before Chemoprophylaxis*	Number of cases	Skin Test after completion of Chemoprophylaxis*				
		Negative	Positive			
			Grade 1	Grade 2	Grade 3	Grade 4
Grade 1	46	33	10	3	..	..
Grade 2	16	4	3	6	3	..
Grade 3	18	1	3	2	10	2
Grade 4	11	..	1	7	3	..
Grade not stated	5	4	1	..	..	..

* Tuberculin tests performed by the Heaf method using undiluted Old Tuberculin.

TABLE XLIV
THURSDAY ISLAND CENTRE

TUBERCULIN TESTS (MANTOUX 1-1,000 O.T. OR FOLLOWED BY 1-100 O.T. AS NECESSARY) AND B.C.G. VACCINATIONS, 1ST JULY, 1960 TO 30TH JUNE, 1961

Place or Group	Number Mantoux Tested	Number Not Returned	Number Positive	Number Positive After Previous B.C.G.	Number Negative	Number B.C.G. Vaccinated	Number Refused B.C.G. Vaccination	Number Refused All Testing
Chest Clinic, Thursday Island	89	8	..	63	18	200*	..	..
Hopevale Aboriginal Mission (Cook-town)	365	..	204	..	161	173*	..	..
Normanton	740	98	348	..	294	294	..	..
Croydon	162	9	84	..	69	77*	..	..
Tamwoy Suburb	115	13	39	32	31	31	..	..
T.S.L.A. and Pioneer Hill	91	5	37	22	27	27	..	..
Horn Island	72	2	22	32	16	..	16	..
Totals	1,634	135	734	149	616	802	16	..

* Includes infants vaccinated without prior Tuberculin Test.

TABLE XLV
COMPLICATIONS FOLLOWING VACCINATIONS, 1960-61

Locality	Age Group	Given B.C.G. No.	Local Ulcer		Enlarged Glands		Incised Glands		Total Complications	
			No.	Percent-age	No.	Percent-age	No.	Percent-age	No.	Percent-age
Chest Clinic, Brisbane	0-2 years ..	368	1	0.27	4	1.09	2	0.54	7	1.9
	3-14 years ..	7,928	1	0.01	..	..	..	..	1	0.01
	Over 14 years ..	900	..	..	..	..	..	..	..	..
	Total ..	9,196	2	0.02	4	0.04	2	0.02	8	0.09
Thursday Island	0-2 years ..	200	6	3.0	6	3.0	2	1.0	14	7.0
	3-14 years } Over 14 years }	602	..	..	..	..	..	..	..	..
	Total ..	802	6	0.76	6	0.76	2	0.25	14	1.74
Cairns	0-2 years } 3-14 years } Over 14 years }	2,221	..	..	1	0.045	..	..	..	..
	Total ..	2,221	..	..	1	0.045	..	..	..	..
Rockhampton	0-2 years ..	49	..	..	..	..	..	..	..	..
	3-14 years ..	1,115	1	0.09	1	0.09	..	..	2	0.18
	Over 14 years ..	99	..	..	..	..	..	..	..	..
	Total ..	1,263	1	0.08	1	0.08	..	..	2	0.16
Townsville	0-2 years ..	18	..	..	..	..	..	..	..	..
	3-14 years ..	188	..	..	..	..	..	..	..	..
	Over 14 years ..	282	..	..	..	..	..	..	..	..
	Total ..	488	..	..	..	..	..	..	..	..
Toowoomba	0-2 years } 3-14 years } Over 14 years }	2,638	..	..	..	..	..	..	..	..
	Total ..	2,638	..	..	..	..	..	..	..	..

TABLE XLVI
SHOWING NUMBER OF TUBERCULOSIS ALLOWANCES BEING PAID IN QUEENSLAND, AT 30TH JUNE, 1961

	Male	Female	Total
Number accommodated in tuberculosis institutions	161	24	185
Number not so accommodated	216	42	258
Total on Allowance	377	66	443

DIVISION OF INDUSTRIAL MEDICINE

Director of Industrial Medicine: E. M. RATHUS, M.B., Ch.B. (Cape Town)

Inspector in Charge—Weil's Disease Control: D. KENNEDY, M.R. San.I.

This Division is mainly engaged in the investigation of occupational health hazards which may occur in industry. The definition of industry is accepted in its widest term and as a result activities and interests range from complex problems affecting the worker's environment to simple matters of ventilation in working places. The relative importance of circumstances which may affect the health and comfort of working men and women cannot be assessed on the character of the problem itself, but can only be gauged on a complete analysis of all data available. To this end the Division is assisted by scientific officers of the Industrial Hygiene Section of the Government Analyst's Department.

Wherever possible physical and chemical determinations are made of the particular situation, directed towards the collation of data which will assist in providing a factual background upon which recommendations may be based. In the case of industries using substances with known toxic manifestations such as lead, arsenic, toxic vapours or modern insecticides, or where substances are used which are capable of producing known occupational diseases such as free silica, or primary skin sensitisers, medical surveys are planned to gauge the extent of the problem. Recommendations for protection and for maintenance of a working environment where the effects of these substances are mitigated to the greatest possible extent are based on the collated data, both scientific and medical. It will be appreciated that the conduct of such investigations is often time-consuming and final conclusions may not be available for some months in individual cases where the amount of data to be massed and sifted is rather involved.

Knowledge of situations is derived from official sources such as the Department of Labour and Industry, or via accredited union representations, or from information available to the Department of Health in one way or another. On infrequent occasions the Division is approached by industry in anticipation of a problem in occupational health.

It may be recorded that co-operation has always been attained from all sections concerned, and the Division has thereby been assisted in maintaining an impartial attitude.

1. ROUTINE EXAMINATIONS

During the year, 104 examinations were conducted on workers for various occupational illnesses. These were either carried out to establish the condition in suspected cases, or to assess the degree to which the worker was exposed in the absence of a symptom-complex. Workers exposed to lead, arsenic, insecticides, organic phosphates, irritating chemicals of various kinds and allied matters were examined. Several claimants were also seen who had compensable coal-workers' pneumoconiosis or silicosis and referred to the Medical Board of the State Government Insurance Office.

Forty-six (46) premises or industries were inspected for the purpose of establishing the presence and degree of an occupational hazard, and the necessary investigations carried out with a view to recommending protective and corrective measures.

About 300 queries or routine matters were received from the State Government Insurance Office and attended to in the usual manner. Several files on contentious claims involving occupational exposure were examined, and an opinion expressed for the advice of the Chief Medical Officer.

2. ENVIRONMENTAL INVESTIGATIONS

The Industrial Hygiene Section of the Government Chemical Laboratory again provided valuable services in the assessment of environmental problems. Estimation of concentrations of vapours, toxic materials and dusts were undertaken in various industries.

Of the more interesting situations examined were high concentrations of toluol experienced in a painting job in rooms not supplied with supplementary ventilation. The building was to be air-conditioned, and in consequence the rooms were windowless. Concentrations of over 500 parts per million of aromatic hydrocarbons were found, and the fumes were both lachrymatory and irritant. A few minutes exposure caused dizziness, and the narcotic action was quite evident. The combined effect was due to ketones and unsaturated hydrocarbons in the paint solvent and commercial toluene used as a thinner.

The hazard in this case lay, of course, in the enclosed nature of the job, and advice was made accordingly.

The hazard to men using organic mercurial fungicides in the treatment of grain seed was investigated in a firm using specially designed apparatus, and it was found that mercury-in-air concentrations were below the maximum tolerance in the most exposed situations.

Methyl bromide fumigation of bulk barley was investigated with a view to estimating the hazard and it was found that high concentrations were present in the face of the grain for considerable periods after removal of the sheeting. Accordingly, adequate ventilation was recommended with frequent testing of working areas as a safeguard.

To date investigations into the use of phosphine as a grain fumigant in Queensland have not revealed any hazard at off-loading points. This may be due to time-lapse factors operative in transport, but it is intended to watch this process, as experience in southern States has not been entirely happy, several cases of phosphine poisoning have apparently occurred on the wharves. The picture is not entirely clear as yet, but there is no doubt of the serious hazard of the gas in high concentrations, and working method must be designed so as to eliminate any possibility of exposure.

3. RADIATION

Regulations under "*The Radioactive Substances Act of 1958*," were gazetted in March. These Regulations require the registration of irradiating apparatus, whether for medical or industrial purposes, while the Act governs the issue of licenses to users of radioactive substances in these fields, and to users of industrial X-ray apparatus and radiotherapeutists.

It is hoped eventually to have a full-time health physicist engaged in implementation of the requirements of the Act and Regulations.

For the present, the services of the University of Queensland Department of Physics are acknowledged in respect of necessary inspections of radioactive sources.

Use of isotopes in industry is expanding slowly, and several sources have been installed in Queensland for various techniques. For the present gamma-radiography, density and level meters and neutron emitters, seem to be the major requirements.

4. Q FEVER

Detailed commentary on this important occupational disease will be found under the Section of Epidemiology and Laboratory of Microbiology and Pathology. However, it may be recorded that one man was found to have a chronic infection with aortic stenosis following endocarditis occurring as a complication of Q fever. This man had a titre of 1:128 against *C. burneti* in January, 1960, and in April, 1961, this was 1:256, with a positive Q phase I. of 1:128.

Dr. O. Powell of Brisbane, who has conducted extensive research into Q fever, considers this as diagnostic of chronic Q fever.

5. MOUNT ISA MINES

During April, 1961, the Director of Industrial Medicine was requested to conduct a follow-up survey on the hazards of mining for lead at Mount Isa Mines by the Industrial Conciliation and Arbitration Commission of Queensland. This followed the original investigation undertaken in 1959, and was planned to assess the nature, degree, and effect, of improvements initiated as a result of recommendations emanating from his report at that time. The report on the 1961 survey has been tendered and the Commission has advised its intention of causing it to be published.

6. NOISE IN INDUSTRY

A few desultory surveys were undertaken with the co-operation of the Commonwealth Acoustics Laboratory in specific instances where a problem was stated or known to exist. Planned surveys cannot readily be undertaken at present and will be confined in the main to requests.

7. URANIUM MINING

A visit was made to Mary Kathleen Uranium Mine and measures to protect workers from absorption of uranium compounds was investigated during 1961. These tests, and others indicate a full measure of protection is being afforded at present. General comment was afforded the industry for its information.

8. LEAD INDUSTRY

This remains one of the main interests of the Division, and considering the proportionate degree of supervision required in lead workers, will continue at this level. Routine visits to known lead industries comprised 131 visits, and upwards of 1,000 slides were examined for stippled cells. Coproporphyrin screening is intensively used, and follow-up of suspect cases of excessive exposure follows the usual methods. The division is responsible for routine tests in any cases referred by private practitioners and hospitals amounting to 300 to 400 annually. Urinary excretion of lead is accepted as a gauge of the intensity of exposure but no reliance is placed on the figure obtained as an arbitrary definition of lead intoxication or effect. It has been the experience of this Division that too much weight is attached to isolated figures, and it cannot be too strongly emphasised that a lead excretion figure in excess of the accepted normal for the general population, is no criterion of lead effect.

Two men were considered to have shown evidence of lead intoxication of moderate degree, and were admitted to hospital for intravenous versenate therapy. Neither man excreted much more than the basic level of 1.5 mgm. per day on each course of therapy, a maximum of 2.48 mgm. being obtained in the more obvious case, and 1.56 in the other. Both men had minor symptoms with a depressed haemoglobin of 11.4 gm. and a coproporphyrin figure of

1,000 μ g/litre in the more severe. The value of routine testing is reflected in the detection of cases of exposure at this level.

The most important groups of workers covered are those in the battery industry, metal reclaiming, lead processing, railway bridge painters and the printing industry. Panel beaters and others with a minimum of exposure are occasionally surveyed at request.

9. SILICOSIS AND ANTHRACO-SILICOSIS

Since the introduction of compulsory mass X-rays by regional declaration, an attempt has been made to collect data on silicosis and coal-workers pneumoconiosis in mining centres. With the co-operation of the Director of Tuberculosis, a simple questionnaire is filled in by each miner appearing for a chest X-ray at the Mobile Unit of the Chest Clinic.

(1) It is hoped that it will be possible to conduct these surveys at 3-5 year intervals.

(2) Analysis of the data obtained may be summarised as follows and for the present it appears that the incidence of these mining diseases appears to be low in Queensland. It will be appreciated that some of the men have had varied mining experience, not confined to the area under which they appear.

Centre	Number of Miners X-rayed	Number of abnormal films	Number of possible cases of silicosis/pneumoconiosis	Films doubtful
Mount Isa	1,580	15	6	1
Howard	179	7	1	Nil
Mary Kathleen	267	Nil	Nil	Nil
Collinsville	467	20	4	2
Cracow	61	5	1	Nil

The surveys are carried out on 70-mm. micro-film, and followed up by a larger film. The latter are sent to the Regional Chest Physician who advises the patient according to the pathology present.

A major difficulty in an area as large as Queensland is the co-ordinating of data, contacting individual patients and obtaining clinical data. It should be appreciated however, that any man diagnosed as suffering from compensatable silicosis or anthraco-silicosis has free access to the Medical Board of the State Government Insurance Office which is the body constituted to examine such claims.

10. ARTICLES, PAPERS, LECTURES, &c.

During the year lectures were given to the following:—

1. Plastics Association on the Health Hazards of Modern Plastics.
2. Queensland Society of Health on Air Pollution (part of symposium).
3. Department of Civil Aviation on Aerial Spraying of Pesticides and Insecticides, especially Organic Phosphates.
4. Safety Engineering Society of Australia, as guest speaker at the inaugural meeting.
5. Two lectures on Industrial Safety and Occupational Health Hazards at the Central Technical College.

An article was prepared on Pesticides for the Queensland Fruit and Vegetable News by invitation, and appeared in the issue of September 15, 1960.

In January, 1961, a paper on Methyl Bromide Poisoning was published in the British Journal of Industrial Medicine by E. M. Rathus and P. J. Landy on experiences in safety supervision on mass fumigation projects (Br. Jnl. Ind. Med. Vol. 18, p. 53, 1961). A paragraph on this problem may be also found in the Annual Report 1958-59.

In August 1960, the report of the Director on his investigation into the hazards of mining for lead at Mount Isa Mines at the request of the Industrial Court of Queensland, appeared in the *Queensland Government Gazette* (Vol. CCIV, No. 104, 1-8-1960).

11. BOARDS

During 1960, the Director of Industrial Medicine was appointed a member of the newly-constituted Health, Welfare and Safety Board under *"The Factories and Shop Act of 1960."*

Six meetings of the Medical Board (Silicosis) were attended, details of which are reported to the Manager, Claims Department, State Government Insurance Office.

12. WEIL'S DISEASE CAMPAIGN

The period under review was noted for exceptionally good field conditions for both harvesting and slack season operations. Rainfalls were well below normal and with a very small percentage of sprawled cane and dry ground conditions the harvest of a slightly increased acreage overall was carried out in record time varying from 21 to 26 weeks. Ideal burning conditions existed and there was little delay to harvesting from any cause.

Because of the ideal prevailing field situation it was not considered necessary to quarantine by "blanket" order large sections of any mill area as a preventative measure. With the cases that did occur being of a sporadic nature confirmation of this decision is apparent. It is not the practice of this section to apply restrictions unless field conditions necessarily warrant such action being taken. It is believed that by taking this view the control measures when implemented are fully recognised, appreciated and observed by interested parties.

Farm cleaning inspections, for the purpose of anti-rat measures and general farm sanitation, totalled 2,335 and were carried out between the cessation of crushing in December and June the following year. These comprised 902 first inspections and 1,433 revisits for the purpose of checking compliance with prior requests. Farms were generally clean and sanitation improved and it is pleasing to record that roadsides are being kept free of harbourages by individual farmers. This position was clarified to the mutual satisfaction of Departments concerned and the Land Administration Commission is thanked for its decision in the matter.

There was no change in staffing arrangements and resident control was exercised in those areas within the usual heavy rainfall belt, Tully to Mulgrave, where past history has shown the greater incidence of disease over recent years.

PEST BOARD ACTIVITIES

Rat infestation showed an upsurge in most mill areas particularly those carrying acreages of "stand-over" cane. This factor, coupled with an unusually dry year which dried up food, moisture, and usual watering places could account for the influx of rodents into canefields in greater numbers. Cane-fields do provide an ideal alternative environment for rat populations with adequate shelter, food and moisture.

There still remains a divergence of views regarding the use and method of rat baiting as a control measure. The opinion is held that only by systematic regular grid baiting throughout fields and farms can any worthwhile control be effected. This method, if properly conducted, is no more wasteful and costly than some methods carried out at present as total coverage can be gained and bait consumption checked as required. Until it is realised that rat control must be given as much, if not more, consideration and importance as any other part of the farming curriculum no appreciable increase in control can be expected. The control of the rat serves a two-fold purpose, the control of rat borne diseases and economic loss to the industry. The two are inseparable and successful efforts with one are reflected in gains from the other.

Reference to baiting figures will show that in some mill areas a selection of baits are available for use in specific localities and under varying conditions. It is hoped that other mills will follow suit and not base full faith in one type of bait which is generally done from the point of view of convenience of handling only, the effectiveness being of lesser consideration.

The greater use of modern chemicals and sprays for weed control and the use of mechanical mowers have contributed

considerably to the reduction of harbourages and are a welcome adjunct to fire and implements usually employed for the purpose.

Drainage in some areas has been considerably improved and has had the effect of draining off usual excess moisture and limited greatly the growing capacity of harbourages. This is reflected in decreased rat infestation and a lowering of fever infections from farms concerned.

TABLE XLVII
ANALYSIS OF WEIL'S DISEASE CONTROL

Mill Area						Area Harvested	Cane Crushed	Total Cane Burned		Burned under Health Regulations (Including 10 Tons per Acre and Under)		Standover Cane
						Acres	Tons	Acres	Tons	Acres	Tons	Acres
Johnstone	..	..	..	..	..	13,200	362,440	13,157	361,423	525	12,580	29
Goondi	..	..	..	..	..	10,218	279,100	10,184	278,027	611	16,500	8
Mourilyan	..	..	..	..	..	9,847	251,806	9,831	251,397	215	3,358	25
Tully	..	..	..	..	..	13,844	353,054	13,771	351,231	1,801	45,048	7
Babinda	..	..	..	..	..	14,122	348,637	14,042	346,575	1,880	41,360	0
Mulgrave	..	..	..	..	..	11,350	342,192	11,344	342,044	4,562	136,877	89
Hambledon	..	..	..	..	..	10,361	324,216	10,458	324,127	55	484	69
Victoria	..	..	..	..	..	23,406	628,285	23,384	628,221	64	508	9
Macknade	..	..	..	..	..	13,507	356,783	13,505	356,727	98	805	0
Invicta (Ingham Line Section)	..	..	..	..	..	3,677	80,819	3,677	80,819	127	1,285	0
Totals	..	..	..	..	..	123,532	3,327,332	123,253	3,320,591	9,938	258,805	236

TABLE XLVIII
ANALYSIS OF WEIL'S DISEASE CONTROL

Mill Area						Farms Inspected	Acres Inspected	Fields Inspected	Fields Burned	Canecutters Signed On	Duration of Crushing
											weeks
Johnstone	..	..	..	..	..	638	4,653	640	76	422	23
Goondi	..	..	..	..	..	539	3,189	540	84	370	23
Mourilyan	..	..	..	..	..	245	1,888	245	29	350	21
Tully	..	..	..	..	..	249	1,463	249	165	644	24
Babinda	..	..	..	..	..	502	3,997	516	20	440	21
Mulgrave	..	..	..	..	..	44	380	44	..	373	22
Hambledon	..	..	..	..	..	..	..	..	..	413	23
Victoria	..	..	..	..	..	..	..	..	..	688	23
Macknade	..	..	..	..	..	..	..	..	..	400	26
Invicta (Ingham Line Section)	..	..	..	..	..	..	..	..	..	84	25
Totals	..	..	..	..	..	2,217	15,570	2,234	374	4,184	..

(Last four mill areas not under resident control. Inspection carried out when requested by cutter, farmer, or miller or their representatives)

TABLE XLIX
ANALYSIS OF WEIL'S DISEASE CONTROL
BAITS DISTRIBUTED FOR RODENT DESTRUCTION BY MILL PEST BOARDS—NUMBER AND TYPE

Mill Area										Phosphorus on Bread	Thallium Sulphate (Wheat Medium)	Other
Johnstone	..	..	..	..	..	..	..	..	..	..	820,000	..
Goondi	..	..	..	..	..	..	..	..	..	..	860,000	8 lb. Phosphorus paste, 600 lb. " Ratsak " prepared bait
Mourilyan	..	..	..	..	..	..	..	..	..	21,000	1,594,667	..
Tully	..	..	..	..	..	..	..	..	..	..	287,000	..
Babinda	..	..	..	..	..	..	..	..	..	1,452,000	600,000	..
Mulgrave	..	..	..	..	..	..	..	..	..	..	660,000	..
Hambledon	..	..	..	..	..	..	..	..	..	..	884,800	3 lb. " Ratsak " and " Sorex" concentrate
Victoria	..	..	..	..	..	..	..	..	..	..	1,800,000	4,450 lb. " Ratsak " prepared bait
Macknade	..	..	..	..	..	..	..	..	..	..	1,600,000	4,480 lb. " Warfarin " prepared bait
Mossman	..	..	..	..	..	..	..	..	..	650,000	635,000	..
Invicta (Ingham Line Section)	..	..	..	..	..	..	..	..	..	..	125,000	..
Totals	..	..	..	..	..	..	..	..	..	2,123,000	9,866,467	..

DIVISION OF MATERNAL AND CHILD WELFARE

Director: H. C. MURPHY, M.B., B.S.

Deputy Director: J. MCFARLANE, M.B., B.S.

Part-time Pre-School Health Officer: A. E. PATERSON, M.B., Ch.M.

Superintendent: M. F. NIXON, A.T.N.A.

Deputy Superintendent: A. P. HERTWECK, A.T.N.A.

THE YEAR'S WORK

Throughout the State there are now 248 Centres and Sub-centres, 70 being in the metropolitan area and 178 in the country.

The following Sub-centres were opened during the year:—

- (1) Aspley on 5th August, 1960, serviced from Nundah.
- (2) Kallangur on 28th September, 1960, serviced from Sandgate.
- (3) Wulguru on 24th November, 1960, serviced from Townsville.
- (4) Brighton on 8th May, 1961, serviced from Sandgate.
- (5) Tara on 18th May, 1961, serviced from Dalby.

Approval has been given for the establishment of Sub-centres at Harlaxton, The Gap, and Carmila.

A car has been allotted to the Goondiwindi Centre, eliminating a great deal of long uncomfortable travelling.

On Saturday, 24th June, 1961, the new Clinic Building at Emerald was opened.

Total attendances of infants and children and expectant mothers for year 1960-61 is 494,215 as compared with the previous record of 478,086 for year 1959-60—showing an increase of 16,129.

VITAL STATISTICS

For the year 1960 the infant mortality rate was 21.0 compared with 20.3 in the previous year. The increase in the rates was due to increased numbers of deaths from immaturity and ill-defined diseases peculiar to early infancy.

Accidental deaths of children under 14 years of age declined from the high figure of 106 in 1959 to 94 in 1960. In the under 1 year group 16 children died as a result of accident, a decrease of 8 on the previous year.

One very notable omission from the table of infantile deaths is diphtheria. However, there was one death from diphtheria in a child aged one year.

During the year 1960, 35,213 births were registered, a decrease of 386 on the previous year. There were 18,164 males and 17,049 females born, giving a masculinity rate of 106.5. The natural increase of 22,843 was equivalent to 1.6 per cent. of the population. The birth rate for 1960 was 24.1 per 1,000 mean population compared with 24.8 in 1959.

MARRIAGES

Registrations of marriages in 1960 numbered 10,227, giving a marriage rate of 7.0 per 1,000 mean population, compared with 7.4 in the previous year. Minors married numbered 5,336 comprising 1,199 males and 4,137 females.

DEATHS

Maternal

The maternal mortality rate was 0.68 per 1,000 live births compared with 0.59 in 1959, the second lowest ever experienced in Queensland. There were 24 deaths during the year, caused by diseases and accidents of pregnancy and childbirth. Of these 15 were due to complications of childbirth and 6 were due to diseases and accidents of pregnancy (excluding three abortions). The causes of the 15 deaths due to diseases and accidents of childbirth were as follows:—

Placenta Praevia or Antepartum Haemorrhage ..	1
Postpartum haemorrhage	4
Disproportion or malposition of foetus	3
Delivery with other prolonged labour	1
Delivery with other complications	1
Puerperal urinary infection	1
Puerperal pulmonary embolism	3
Puerperal eclampsia	1

The cause of the 6 deaths due to diseases and accidents of pregnancy were as follows:—

Toxaemias of pregnancy	3
Other complications of pregnancy	1
Ectopic gestation	2

INFANTILE MORTALITY

Deaths of infants aged under one year numbered 740, comprising 404 males and 336 females, compared with 721 in 1959. The infant mortality rate increased from 20.3 in 1959, which, with 1955, was the second lowest recorded in Queensland to 21.0 in 1960. Compared with the previous year, the rate for the metropolitan area increased from 17.2 to 18.3, the rate for the sub-tropical (non-metropolitan) area from 19.5 to 22.4 whilst the rate for the tropical area declined from 25.4 to 22.5 per 1,000 live births.

The total number of deaths due to prematurity (unqualified) was 140 compared with 118 in 1959. Deaths from prematurity since 1950 were as follows:—

1950	155
1951	153
1952	187
1953	145
1954	185
1955	137
1956	188
1957	163
1958	139
1959	118
1960	140

Compared with 1959, the metropolitan area recorded one and the rest of the sub-tropical area 15 more deaths from immaturity (unqualified), whilst in the tropical area the number of deaths increased by six.

Deaths of Children Aged One Year and under Five Years

(a) Deaths of children aged one year and under two years during the year 1960 numbered 82, representing a death rate of approximately 2.4 per 1,000 children in that age group. There were 62 deaths in 1959.

The chief causes of death were:—

Accidents	26
Pneumonia—	
Bronchopneumonia	8
Other	3
Bronchitis	5
Congenital Malformations	10
Gastroenteritis and Colitis	5
Malignant Neoplasms	5

Of the 26 deaths (11 males, 15 females) due to accidents, five were caused by accidental poisoning, five by drowning, and nine by motor vehicle accidents, five of these being non-traffic accidents. Of the five deaths due to accidental poisoning, one was caused by drugs, three by petroleum products, and one by lead and its compounds.

(b) The deaths of children aged two and under five years during the year numbered 78, representing a death rate of approximately 0.8 per 1,000 children in that age group. Deaths in 1959 were 96.

The chief causes of death were:—

Accidents	18
Malignant Neoplasms	15
Pneumonia (all kinds)	8
Congenital Malformations	6
Bronchitis	5

Of the 18 deaths due to accidents, eight were caused by motor vehicle accidents and two by drowning.

Accidental Deaths of Children Aged One and Under Fifteen Years

Accidental deaths of children in this age group numbered 94 in 1960 compared with 106 in 1959, an average of 92 in the ten years 1951 to 1960 inclusive. The total deaths of children in this age group from all causes were 312, of which 30 per cent. were caused by accident.

TABLE L
CAUSES OF DEATHS IN INFANTS UNDER ONE YEAR—QUEENSLAND, 1960

Cause	1959	1960				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	118	29	59	52	140	+19
Immaturity with mention of any other subsidiary condition	8	..	5	..	5	
Congenital Malformations	155	55	58	38	151	— 4
Post-natal Asphyxia and Atelectasis	68	36	27	12	75	+ 7
Intracranial and Spinal injury at birth	66	11	21	18	50	—16
Other birth injury	40	13	29	18	60	+20
Haemolytic disease of newborn (Erythroblastosis) ..	21	6	7	5	18	— 3
Pneumonia of newborn	18	3	9	6	18	..
Haemorrhagic disease of newborn	16	5	4	1	10	— 6
Neo-natal disorders arising from Maternal Toxaemia ..	7	8	7	3	18	+11
Diarrhoea of newborn	2	..	..	..	..	— 2
Other diseases peculiar to early infancy	32	27	17	4	48	+16
Total Diseases of early infancy	551	193	243	157	593	+42
Bronchopneumonia, other and unspecified Pneumonia ..	34	5	16	9	30	— 4
Gastroenteritis and Colitis	21	1	16	10	27	+ 6
Lobar Pneumonia	11	1	4	3	8	— 3
Diseases of Pancreas	2	..	1	3	4	+ 2
Meningitis, except Meningococcal and Tuberculous ..	9	3	4	2	9	..
Accidents, Poisonings and Violence	24	1	11	4	16	— 8
All other causes	69	20	17	16	53	—16
Total Deaths under 1 year	721	224	312	204	740	+19

(a) Excluding Metropolitan.

TABLE LI
CAUSES OF DEATHS IN INFANTS UNDER ONE MONTH OF AGE—QUEENSLAND, 1960

Cause	1959	1960				Increase or Decrease
		Metropolitan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	117	29	59	52	140	+20
Immaturity with mention of any other subsidiary condition	8	..	5	..	5	
Congenital Malformations	106	34	39	26	99	— 7
Post-natal Asphyxia and Atelectasis	67	36	27	12	75	+ 8
Intracranial and Spinal injury at birth	65	11	20	18	49	—16
Other birth injury	40	13	29	18	60	+20
Haemolytic diseases of newborn (Erythroblastosis) ..	21	6	7	5	18	— 3
Pneumonia of newborn	18	3	9	6	18	..
Haemorrhagic disease of newborn	16	5	4	1	10	— 6
Neo-natal disorders arising from Maternal Toxaemia ..	7	8	7	3	18	+11
Diarrhoea of newborn	2	..	..	..	..	— 2
Other diseases peculiar to early infancy	31	27	15	4	46	+15
Total Pre-natal Causes	498	172	221	145	538	+40
All other Causes	22	5	8	7	20	— 2
Totals	520	177	229	152	558	+38

(a) Excluding Metropolitan.

TABLE LII
CAUSES OF DEATHS IN INFANTS MORE THAN ONE MONTH, BUT LESS THAN TWELVE MONTHS OF AGE—QUEENSLAND, 1960

Cause	1959	1960				Increase or Decrease
		Metro- politan	Sub-Tropical (a)	Tropical	Total	
Immaturity (unqualified)	1	..	..	..	..	— 1
Immaturity with mention of any other subsidiary condition	..	..	..	..	..	
Congenital Malformations	49	21	19	12	52	+ 3
Post-natal Asphyxia and Atelectasis	1	..	..	..	..	— 1
Other diseases peculiar to early infancy	2	..	3	..	3	+ 1
Total Pre-natal Causes	53	21	22	12	55	+ 2
Bronchopneumonia, other and unspecified Pneumonia ..	34	5	16	9	30	— 4
Gastroenteritis and Colitis	21	1	16	10	27	+ 6
Lobar Pneumonia	11	1	4	3	8	— 3
Diseases of Pancreas	2	..	..	2	2	..
Meningitis, except Meningococcal and Tuberculosis ..	8	3	2	2	7	— 1
Accidents, Poisonings and Violence	20	1	9	4	14	— 6
All other causes	52	15	14	10	39	—13
Total Deaths 4 weeks and under 1 year	201	47	83	52	182	—19

(a) Excluding Metropolitan.

TABLE LIII
CAUSES OF DEATHS OF PREMATURE (IMMATURE) INFANTS

										1958	1959	1960
Immaturity unqualified	..	..	..	..	..	..	..	..	..	139	118	140
Ill-defined diseases peculiar to early infancy, with immaturity	..	..	..	..	..	..	..	..	..	18	22	33
Post-natal Asphyxia and Atelectasis, with immaturity	..	..	..	..	..	..	..	..	..	31	45	43
Intracranial and Spinal injury at birth, with immaturity	..	..	..	..	..	..	..	..	..	26	22	18
Other birth injury, with immaturity	..	..	..	..	..	..	..	..	..	24	24	45
Neo-natal disorders arising from Maternal Toxaemia, with immaturity	..	..	..	..	..	..	..	..	..	7	5	17
Pneumonia of newborn, with immaturity	..	..	..	..	..	..	..	..	..	3	7	5
Haemorrhagic diseases of newborn, with immaturity	..	..	..	..	..	..	..	..	..	1	2	3
Haemolytic disease of newborn, with immaturity	..	..	..	..	..	..	..	..	..	6	8	6
Nutritional Maladjustment, with immaturity	..	..	..	..	..	..	..	..	..	..	..	..
Immaturity with mention of any other subsidiary condition	..	..	..	..	..	..	..	..	..	3	8	5
Umbilical Sepsis, with immaturity	..	..	..	..	..	..	..	..	..	1	..	..
Other Sepsis of newborn, with immaturity	..	..	..	..	..	..	..	..	..	..	..	1
Diarrhoea of the newborn, with immaturity	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	..	..	..	..	..	..	259	261	316
Total under one year, with immaturity	..	..	..	..	..	..	..	..	..	259	261	316
Total under one month, with immaturity	..	..	..	..	..	..	..	..	..	255	259	315

TABLE LIV
ACCIDENTAL DEATHS OF CHILDREN (AGED 1 AND UNDER 15 YEARS) IN QUEENSLAND

				1955		1956		1957		1958		1959		1960		Total
				Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	
Road Accidents	..	..	..	15	9	14	9	20	9	18	13	24	11	17	13	172
Firearms	..	..	..	2	..	3	..	..	..	3	1	6	..	2	1	18
Drowning	..	..	..	17	1	21	5	16	6	13	13	19	7	11	6	135
Falls	..	..	..	1	..	5	2	1	1	1	1	1	2	2	1	18
Other Accidents	..	..	..	21	18	19	17	25	11	21	9	22	14	19	22	218
				56	28	62	33	62	27	56	37	72	34	51	43	561
Totals	..	..	..	84		95		89		93		106		94		561

BREAST FEEDING

"Many of the Infant Welfare Nurses have not the enthusiasm or the resolution to persist in their efforts to succeed in maintaining breast feeding."

This statement was made by the President of the Queensland Branch of the British Medical Association in his presidential address on September 3rd, 1960.

That this is not a correct appraisal of the present position is shown by the following survey:—

Admissions of babies to three (3) large metropolitan Centres from the 1st January 1960 to 31st December, 1960, totalled 3,880. Of this total on admission 2,455, or 63 per cent., were breast fed, 498 were partly breast fed and 927, or 24 per cent., were artificially fed. Of the 2,455 who were breast fed on admission, at 3 months 1,450, or 59 per cent, were still being breast fed. Of those who had ceased breast feeding 354 were weaned by Doctors, 298 were weaned by their mother, 256 ceased breast feeding owing to failure of supply due mainly to the apathy on the part of the mothers despite the enthusiasm and efforts of the Child Welfare Sisters, and 23 only were weaned by Clinic Sisters; 74 had ceased to attend.

It would appear, therefore, from these facts that the present decline in breast feeding cannot be attributed to lack of enthusiasm on the part of the Clinic Sisters but is mainly the fault of the Doctors concerned.

As Illingworth puts it—

"Most difficulties are man made and preventable, and the cause of them lies in the medical attendant rather than in an inherent defect in mother or baby."

One could add "or in the Clinic Sister."

MELLERIL DROPS

During the year an investigation was made on the use of Melleril drops as a tranquiliser in babies and children. Tablets had previously been found to be useful but difficult to administer to young babies. The drops were found to be easy to administer, palatable, and completely successful; in fact, more effective than the tablets probably due to better absorption.

All types of disorders were treated—temper tantrums, nightmares, sleeplessness, stammering and overstimulation. The children treated ranged in the age from a few weeks to 5 years, and the response to treatment was achieved within 1 to 2 weeks. The response was usually maintained after the drops were ceased.

SCURVY

Thirty-two cases of sub-clinical scurvy have been reported from the Brisbane Children's Hospital. These cases occurred in the past 10 years and have been demonstrated radiologically. Names and addresses were obtained and investigation showed that of these 32 children 23 certainly did not attend Maternal and Child Welfare Centres; two were doubtful (1 from Lawnton and 1 from Dunwich) and 1 came from New South Wales. Of the remaining 6, one was breast fed and made only 1 visit at 3 weeks, the other 5 were artificially fed and 2 of them made their first visit at 16 weeks, and 20 weeks respectively. Both babies were given haliborange. Of the other 3, one was given orange juice at 4 weeks, the second was given orange juice at 5 weeks, and the third was ordered pentavite at 14 weeks. Apart from the breast fed baby, four of these children were brought to the Clinic for only 4 visits. The remaining baby had made 8 visits and had been started on orange juice at 5 weeks.

The value of early attendance at Clinics is clearly demonstrated in this survey, for it is the practice to recommend the introduction of orange juice at 4 weeks in order to prevent any possibility of the occurrence of scurvy.

WEIGHT GAIN IN THE FIRST YEAR OF LIFE OF QUEENSLAND BABIES

One hundred and twenty three thousand seven hundred and eighty separate weight recordings taken over a period of 5 years were assembled during the year and grouped according to whether the child lived in a tropical, sub-tropical or metropolitan area. Thirty five thousand six hundred and two readings were taken in the metropolitan area; 47,190 in the sub-tropical area and 40,988 in the tropical area.

It can be seen from the accompanying graphs (see page 36) that there is no significant difference between the rate of growth in the first year of life in the 3 groups. This shows that climatic conditions do not influence the first year's growth in Queensland, irrespective of the child's birth weight, nor is there any difference in the growth of children born in the metropolitan area and urban areas.

SANDGATE HOME

The year commenced with 56 children in residence. Admissions during the year were 728, made up as follows:—

Boys under 5 years	176
Boys 5 years to 10 years	197
Boys over 10 years	32
Total boys	405
Girls under 5 years	150
Girls 5 years to 10 years	145
Girls over 10 years	28
Total girls	323

Total number of days children spent in the Home, 17,760. Average duration of residence for each child, 24.3. Daily average, 48.1. Total number of families admitted, 291. Number of children sent to hospital, 4; number of children returned from hospital, 1; families returned once during the year, 20; families returned twice during the year, 2.

SANDGATE HOME—BABY WARD

During the year 187 babies have been admitted to the Baby Home, the daily average being 12.1.

On January 31st the babies were transferred to the new building after being in residence at the Centre in Brighton Road for 12 months while the existing Baby Home was being altered and enlarged.

This age-group, from small babies to approximately 18 months of age are occupying the top floor of the new building, the bed state being 23, i.e. 10 cots and 4 bassinets, also 2 cots in the Isolation Room.

The bottom floor was completed on February 27th. On this day the toddlers, between the ages of 3 years and 18 months, were transferred from the Main Home and the Baby Home, thus commencing this section with 18 toddlers. During the period from February 27th to June 30th, 104 children were admitted; males 58, females 46, with a daily average of 17 children.

DIRECTOR'S CONSULTANT CENTRE

Attendances during the year ended June, 1961, were as follows:—

Number of children examined for admission to Sandgate Home	1,230
Number advised by 'phone	583
Attendance at Director's Consultant Centre for advice	2,220
Total number of children examined or advised at Centre	4,033

PRE-SCHOOL HEALTH CENTRES

Metropolitan Area

The total number of examinations during the year was 5,744 of which 2,517 were first examinations and 3,227 were subsequent examinations. The daily average per Clinic during the year was 17.8.

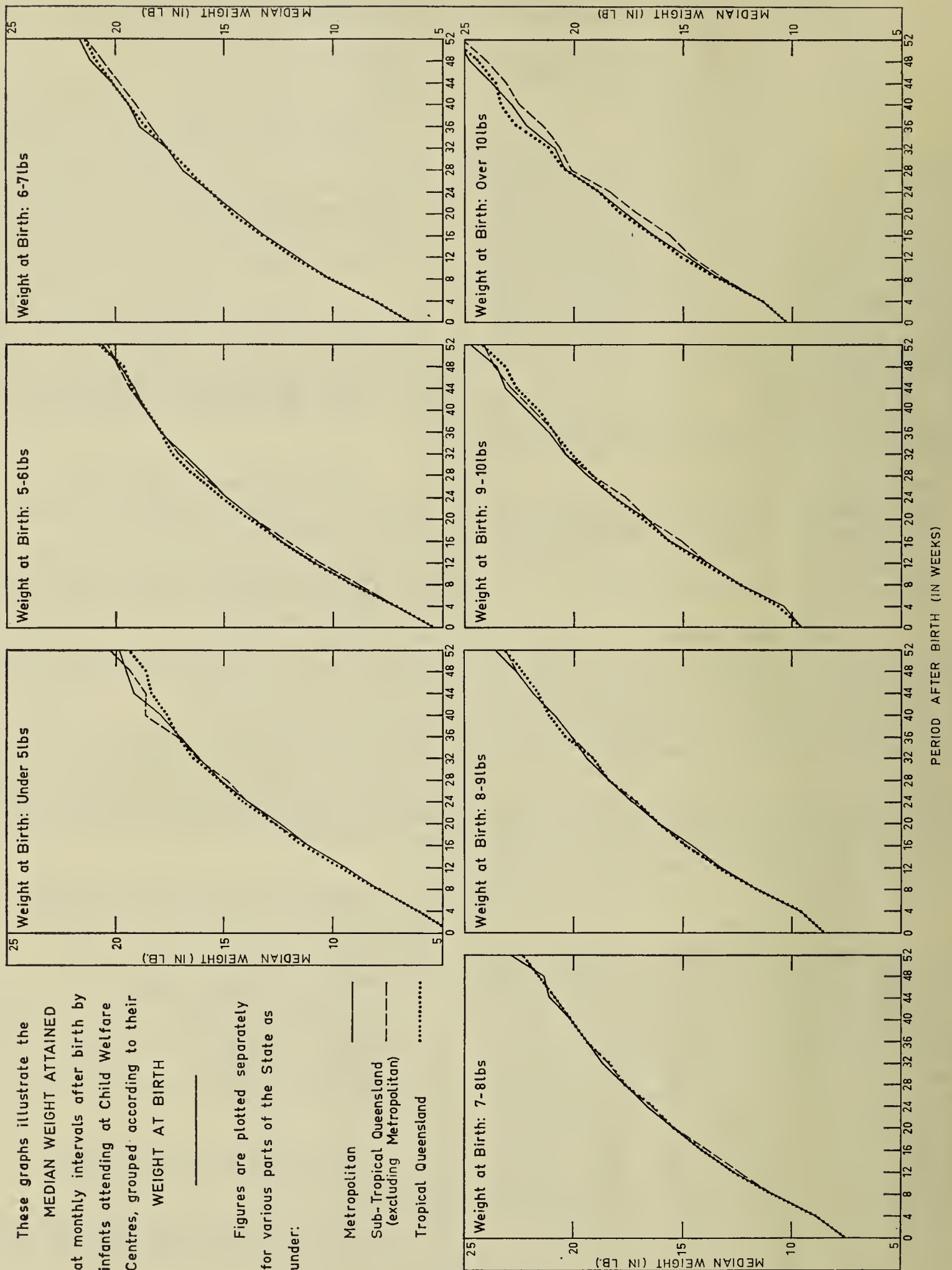
A Pre-school Clinic was opened at Belmont and eight (8) Kindergartens are now visited, including Yeronga Kindergarten which was visited for the first time in October.

Country Centres

The total number of examinations of toddlers at Country Centres is as follows:—

TABLE LVII

Centres	New Patients	Subsequent Visits	Total Visits	Number of Clinics	Average per Clinic
Cairns	227	161	388	34	11.4
Rockhampton	112	13	125	20	6.2
Toowoomba	33	36	69	17	4.05
Townsville	170	126	296	22	13.4



ANTE-NATAL

Attendances continue to rise at the Ante-natal Clinics. Fortunately this rise has not been as marked as in the previous year. This is due to the opening of the Ante-natal Clinics at the Mater Mothers' Hospital. Mothers attending the Maternal and Child Welfare Clinics can be confined at this hospital as well as at the Brisbane Women's Hospital.

During this year 2 babies of Rh negative mothers were affected and required exchange transfusions. One multipara suffered a ruptured uterus during delivery after receiving a pitocin drip and required hysterectomy. In all, there were 10 still births and neonatal deaths and 4 caesarean sections.

In February, 1961, medical students (6th year) began attending the Fortitude Valley Ante-natal Clinic for tuition in ante-natal care. Four students attend for a period of 4 weeks. These students attend the Sister's lectures to the expectant mothers as well as the physiotherapy classes.

Another new feature has been the introduction of a film showing for expectant mothers. This is particularly for the mothers attending the Sister's talks, but all are encouraged to attend. So far there have been 3 showings at the Fortitude Valley Clinic (at mid-day on a selected Thursday) and 79 mothers have seen the films which are:—

Menstruation (a colour cartoon).

Pre-natal Care (an American film detailing Pre-natal Care).

My First Baby (a British film showing an actual delivery).

Physiotherapy in Obstetrics (an Australian film produced in Sydney under the guidance of Dr. Bruce Mayes).

In addition to the 79 expectant mothers who have viewed the films one expectant father has attended and it is hoped in the future to extend this phase of parent education to the fathers as well as the mothers.

TABLE LVIII
SUMMARY OF ANTE-NATAL CASES

	New Patients	Subsequent Visits	Post-natal Examination	Total	Talks to Mothers	Attendances at Film
Caboolture	34	236	31	301	..	..
Fortitude Valley	209	1,705	167	2,081	639	79
Woolloongabba	441	3,594	379	4,414	639	..

	Woolloongabba				Fortitude Valley				Caboolture			
	Multipara		Primipara		Multipara		Primipara		Multipara		Primipara	
	A	B	A	B	A	B	A	B	A	B	A	B
Number	343	122	95	40	124	99	55	17	28	11	10	3
Non-pregnant	7	..	..	..	2	..	1	..	..	..	..	..
Hb. below 13	110	85	53	17	77	39	28	15	14	3	3	1
Hb. below 10·8	30	10	8	1	13	9	7	..	2	1	2	..
Toxaemia (home)	71	13	28	4	17	7	13	3	6	..	5	1
Toxaemia (hospital)	52	3	30	1	28	3	14	3	1	..	..	..
Morning sickness	133	42	45	16	47	53	24	11	8	7	3	2
Varicose Veins	63	8	3	..	16	12	13	1	4	1	..	..
Vaginal discharge	27	14	4	2	6	18	5	..	3	1	..	..
Rh.-ve No anti-bodies	36	13	18	3	14	16	11	2	4	..	2	..
Rh.-ve anti-bodies	4	1	1	..	..	..	..	..	..	..	..	..
Threatened miscarriage	14	11	1	2	3	10	5	2	1	..	..	..
Miscarriage	9	..	5	..	..	..	2	..	..	..	..	..
Constipation	12	2	4	1	1	2	2	1	1	1	2	..
Post-maturity	22	..	6	..	13	1	6	..	5	..	4	..
Raised Blood Pressure	..	..	..	..	..	..	..	..	2	..	..	..
Toxaemia with raised Blood Pressure	16	..	1	..	7	1	..	..	1	..	..	..
Urinary tract infection	14	5	4	2	4	10	3	1	3	..	1	..
Cardiac murmur	8	1	3	1	..	..	..	..	..	..	..	..
Retroversion	4	..	..	..	..	..	..	..	..	..	..	..
Caesarian Section	3	..	..	..	1	..	..	..	..	..	..	..
Exchange transfusion	2	..	..	..	..	..	..	..	..	..	..	..
Ruptured uterus	1	..	..	..	..	..	..	..	..	..	..	..
Foetal abnormality	5	..	2	..	1	..	1	..	3	..	..	..
Twins	4	..	1	..	2	..	1	..	..	..	..	..
Still-births	8	..	2	..	..	..	..	..	..	..	..	..
Fibroids	1	..	..	..	..	..	..	..	..	..	..	..
Breech	1	..	1	..	..	..	..	..	1	..	..	..
Haemorrhoids	..	..	..	..	2	..	..	..	..	..	..	..
Miscellaneous	28	7	8	2	10	11	2	2	12	2	1	1

A = Confined by 30th June, 1961. B = Unconfined by 30th June, 1961.

TABLE LIX
POST-NATAL EXAMINATIONS

	Woolloongabba		Fortitude Valley		Caboolture	
	Multipara	Primipara	Multipara	Primipara	Multipara	Primipara
Number	188	57	65	32	18	17
Raised Blood Pressure	71	15	29	10	6	4
Retained products	12	9	10	7	1	..
Retroversion	38	18	14	7	3	1
Subinvolution	14	3	1	3	1	..
Cystocele	8	1	1	1	..	1
Rectocele	6	..	3	1	..	..
Cystocele and Rectocele	5	..	3	..	..	..
Urinary Tract infection	6	..	1	..	..	..

SISTER LECTURER'S SECTION

The Mothercraft teaching in the schools for the year 1960 was satisfactory and the lessons were given in the same schools as in the previous year. However, the number of girls and classes in the schools has increased and it was found necessary to appoint another Sister to the Metropolitan Area.

Mothercraft lessons were given by the Sister in Charge of Charters Towers Centre to pupils at Sub-Junior level at

Charters Towers State High School. The Sister on the Rail Car gave lessons at all Centres at which she called—both State Primary and Convent Schools.

Examination results were satisfactory and 94 per cent. of girls obtained Certificates; two thousand five hundred and twenty-six (2,526) examination papers and two thousand five hundred and twenty-six (2,526) Mothercraft projects from the Metropolitan Area and sixty-five (65) examination papers and projects from the Country Centres were corrected.

SOCIAL WELFARE SECTION

This year there has been a slight decrease in the Social Service and Home visits.

	1959-60	1960-61
Social Service Visits	4,803	4,762
Number of newborns visited at home	1,166	996
Number of newborns visited in Brisbane Women's Hospital, St. Andrew's Hospital and Princess Alexandra Hospital, Corinda, Boothville and Mater Mothers Hospital	11,546	11,938
Number of Test Feeds given	115	83
Number of Phenylketonuria Tests	39	342

CORRESPONDENCE SECTION

There has been an increase of number of birth notifications received.

Letters of advice have been sent to mothers in India, Fiji, New Guinea and Northern Territory. These mothers are unable to visit a health centre in their own district. Country mothers visiting the city who have been receiving advice by correspondence have visited this section, and also

a number of country mothers whose babies were born in Brisbane, have paid a visit here before returning home. They are all very appreciative of the help given by Correspondence Service.

The usual lists of births and deaths are sent regularly to the City Council Health Department as soon as they are received.

TABLE LX
CORRESPONDENCE

	Year ending 30-6-61	Year ending 30-6-60
Number of Birth Notifications received	5,653	5,430
Number of Circulars posted—		
(1) Within reach of a Centre	2,259	1,716
(2) Not within reach of a Centre	3,394	3,714
Number of follow-up Circulars posted	734	2,684
Letters to Correspondence in response to Circular Number 2	889	812
Letters of advice re feeding management sent on request	1,564	1,692
Number of “ Care of Mother and Child ” sent on request	827	679
Number of pamphlets sent advising Triple Antigen Immunisation	4,384	8,114
Number of pamphlets sent advising Quadruple Antigen Immunisation	1,618	
Number of Birthday Cards sent during the year	224	203
Number of telephone calls re feeding or management	528	466

PUBLICATIONS

Requests for “Care of Mother and Child,” “The Expectant Mother” and “Ante-Natal and Post-natal Exercises” are continuously being received. The revised booklet “Problems of Prematurity” is in the hands of the printer.

MEDICAL STUDENTS

As in previous year, final year medical students attend two clinics conducted by the Director.

NEWSPAPER ARTICLES

As in previous years, articles of topical interest in infant and pre-school management were forwarded each month to 60 newspapers throughout the State. Subjects dealt with included:—

- Should my child go to the Dentist?
- How can I toilet train my child?
- What should I do for baby’s colic?
- Should my baby vomit?
- How should my child spend the school holidays?
- Care at Christmas
- Is your child hard of hearing?
- Are you careful?
- What does my child need?
- What is baby’s heritage?
- Should I give my children vitamins?
- Is your baby immunised?

TABLE LXI

VISITS TO NEWBORNS, SUBSEQUENT AND TOTAL VISITS

Year	Visits to Newborns	Subsequent and other Visits	Total Visits
1958-59	28,394	1,527	29,921
1959-60	26,840	1,710	28,550
1960-61	30,434	1,621	32,055

TABLE LXII

ATTENDANCES AT CENTRES
Number of Cases seen at the Centres

	1958-59	1959-60	1960-61
Infants—			
Under one year	21,610	22,352	22,859
One to two years	6,127	6,049	6,848
Over two years	2,675	2,951	3,134
Total	30,412	31,352	32,841
Expectant mothers.. .. .	1,294	1,311	1,713
Total new cases	31,706	32,663	34,554

TABLE LXIII

ATTENDANCES OF INFANTS AND CHILDREN AT MATERNAL AND CHILD WELFARE CENTRES AND SUB-CENTRES
Metropolitan

	1958-59	1959-60	1960-61
Fortitude Valley and Sub-Centres ..	27,581	34,437	31,426
Herschell Street and Sub-Centres ..	42,152	39,461	40,086
Moorooka and Sub-Centres (Parent Centre from 28-11-60)	..	..	8,213
Nundah and Sub-Centres	15,528	15,376	15,122
Paddington and Sub-Centres	12,010	13,381	13,432
Sandgate and Sub-Centres	10,531	11,387	13,980
South Brisbane Sub-Centres	12,219	12,625	11,329
West End and Sub-Centres	8,104	8,106	9,613
Woolloongabba and Sub-Centres ..	34,744	35,345	28,799
Wynnum and Sub-Centres	10,915	10,041	10,672

Country

Atherton and Sub-Centres	5,395	4,854	4,447
Ayr and Sub-Centres	7,685	7,077	6,449
Barcaldine and Sub-Centres	3,100	2,817	2,906
Biloela and Sub-Centres	8,347	7,961	7,195
Bowen and Sub-Centres	5,475	5,716	6,219
Bundaberg and Sub-Centres	13,125	14,196	15,630
Cairns and Sub-Centres	19,023	20,472	23,100
Charleville and Sub-Centres	5,843	4,956	4,028
Charters Towers	3,350	3,654	3,479
Dalby and Sub-Centres	5,214	5,188	5,250
Emerald and Sub-Centres	2,957	3,639	4,138
Gayndah and Sub-Centres	3,801	5,390	6,052
Gladstone and Sub-Centres	5,871	5,415	4,499
Goondiwindi and Sub-Centres	6,508	6,504	6,743
Gympie and Sub-Centres	8,532	8,373	9,024
Ingham and Sub-Centres	4,137	4,464	5,402
Innisfail and Sub-Centres	11,072	11,614	11,401
Ipswich and Sub-Centres	18,952	19,881	20,632
Kingaroy and Sub-Centres	4,552	3,958	3,435
Longreach and Sub-Centres	3,172	3,157	2,626
Mackay and Sub-Centres	16,396	17,377	17,842
Mareeba and Sub-Centres	4,548	3,993	4,985
Maryborough and Sub-Centres	10,960	12,217	12,818
Mount Isa and Sub-Centres	5,883	7,830	8,602
Murgon and Sub-Centres	3,519	3,460	3,637
Nambour and Sub-Centres	6,481	7,222	8,079
Railway Car Sub-Centres	4,185	4,466	4,543
Rockhampton and Sub-Centres	17,234	19,148	24,173
Roma and Sub-Centres	4,978	4,400	5,707
Southport	12,918	12,756	10,714
Toowoomba and Sub-Centres	11,319	11,059	11,325
Townsville and Sub-Centres	18,442	18,904	20,011
Warwick and Sub-Centres	8,166	7,563	7,137
Social Welfare Services	4,449	4,803	4,762

TOTAL ATTENDANCE OF INFANTS AND CHILDREN AND EXPECTANT MOTHERS

1958-59	1959-60	1960-61
463,499	478,086	494,215

DIVISION OF SCHOOL HEALTH SERVICES

Chief Medical Officer: P. R. PATRICK, M.B., B.S. (Qld.), D.P.H. (Syd.)

Medical Officer: G. M. S. MAY, M.B., B.S. (Melb.)

Chief Dental Officer: T. D. PUGH, L.D.S. (Eng.), L.D.Q.

FIFTY YEARS OF SCHOOL HEALTH

It is now fifty years since the School Medical Branch of the Department of Public Instruction was established in 1911. It was founded chiefly, to deal with eye diseases of Western Queensland children, of whom at least twenty per cent. were suffering from trachoma. In the fight against trachoma, several measures were adopted. A full-time Ophthalmologist was appointed; local practitioners in Western Queensland examined children at the schools in their area; health education was commenced by school teachers and later the Wilson Ophthalmic School Hostel was built in Brisbane. Today, the amount of trachoma is negligible and the Wilson Hostel is used for other purposes.

In addition to the treatment of eye diseases, the early school medical services, through the appointment of medical officers, school sisters and dentists followed the pattern of overseas services of routine medical examinations and dental treatment. The service slowly expanded and today every primary school in Queensland is visited by a School Sister. The dental service is handicapped by lack of staff and dental treatment is restricted to schools outside a radius of fifteen miles from a hospital board dental clinic. School dentists, at present, follow a policy of priority to children in the more remote areas of the State.

Over the years, there has been a great change in the physical health of school children. A survey in 1951, revealed that children have greatly increased in stature. Today, communicable diseases are not nearly the scourge they were fifty years ago. In public health, at the present time, there is a realisation that while physical health will continue to deserve attention, more emphasis must be placed on social and mental health. School Health Services can play an important part by finding, during visits to schools, those children in need of help in these new fields.

STAFF

The school nursing staff has followed the policy of priority to the country. When vacancies occur in Brisbane, they are not filled until country centres all have a school sister. This policy often results in Brisbane being short of school sisters. This occurred during the year, but the appointment of three new sisters allowed transfers to Brisbane.

ROUTINE SCHOOL HEALTH EXAMINATIONS

The number of schools visited and the examinations conducted by school sisters were approximately the same as in previous years. Country sisters visited 836 school and metropolitan sisters, 82 schools. Of these 918 schools, 91,632 school children were examined. When a school is visited, priority is given to the examination of pupils just commencing school. In addition, pupils in at least two of the upper grades are examined. Generally, pupils are examined three times during their primary school career. Where a medical officer is employed, he examines all the children in the first grade, as well as those in other grades referred to him by the school sister, teachers and parents. During the year, medical officers conducted 7,214 such examinations. After school health visits, parents are advised of defects about which further medical advice is thought necessary. The total number of children referred in this manner was 4,228, or 4.6 per cent. of all examined.

The two physical defects which are most likely to impede the progress of otherwise normal children at school are those of hearing and vision. Testing for these two conditions is part of the routine school health examinations. By the courtesy of the Commonwealth Acoustic Laboratory, every school centre in Queensland has now a portable pure tone audiometer for the testing of hearing. Children with newly discovered hearing losses at school examinations totalled 453. While the hearing loss, in most cases, was not severe enough to need special education, it was sufficient enough to warrant treatment or advice to teachers regarding the positioning of the child in the class.

Defective vision is the commonest condition requiring attention found in school children, apart from dental caries. This year, 1,962 children were notified for defective vision and a further 436 children were found to have other eye defects, including strabismus.

Other important defects found include those of the nose and throat, postural, orthopaedic, hernias and heart conditions.

The value of school health examinations would be entirely lost if no action to remedy defects were taken by parents. With the co-operation of head teachers, checks are made of parents' efforts in this regard one month, and then again at two months after the school health visit. From figures returned during the year it was found that over eighty per cent. of

parents had sought medical advice for their children after two months had elapsed from the time of notification of a defect. This is a minimal estimate of the response of parents, as a visit to the school at a later date often reveals more children who have had attention.

COMMUNICABLE DISEASES IN SCHOOLS

This year was not a serious one in regard to the incidence of communicable diseases in school children. The commonest cause of absenteeism in school children is upper respiratory tract infection. As this is not a notifiable disease, the exact effect it has on school attendance is not known. However, during the next twelve months it is proposed to conduct a survey of absenteeism amongst Brisbane schools. The results of such a survey will throw light on the influence of communicable disease.

From the diseases notified to the Director-General, it is found that during 1960-61 there were 289 cases of infectious hepatitis reported as occurring among school children. These cases were part of the epidemic of this disease which occurred throughout the State in all age groups up to about forty years. In the present state of our knowledge there is little that can be done in the way of prevention of infectious hepatitis other than attention to personal hygiene, such as hand washing after the use of the toilet and before food preparation. The only other notifiable diseases which occurred in any magnitude amongst school children were scarlet fever (81 cases) and rheumatic fever (75 cases). Low figures were recorded for diphtheria (2 cases), poliomyelitis (8 cases) and tetanus (5 cases). These low figures are, no doubt, the result of immunisation against these diseases. While this low incidence is satisfactory, there is one disquietening fact about the present immunisation status of Queensland school children. From figures returned by school sisters regarding immunisation of children in the first year at school, it is revealed that while most parents obtain primary immunisation for infants, many fail to see that their children receive booster doses against diphtheria and tetanus at school entry age. The percentage of first grade children who had received primary immunisation was 93, but only 46 per cent. of these children were found to have received reinforcing injections against diphtheria and tetanus. This position may well result in cases of these diseases occurring during school and later life. There is need for health education of the public in this regard.

During 1960 the Division of Tuberculosis continued its programme of tuberculin testing of school children. Officers from that division visited schools in Brisbane, Ipswich, Cairns, Townsville, Rockhampton, and Toowoomba. In Brisbane, 203 schools were visited and in Ipswich, 20 schools. The percentage of natural positive reactors in the primary school leavers (mostly twelve and thirteen-year-old children) in Brisbane and Ipswich was approximately twenty-one. In country areas there was a higher reactor rate of 34.6 per cent.

Gatton Agricultural College was visited during the year to carry out tetanus immunisation amongst students and staff.

Cleanliness surveys to detect cases of scabies, impetigo and pediculosis, while still necessary in some areas, do not occupy much of the school sisters' time. Cases of these conditions did occur during the year but not in any great incidence.

SURVEY OF ASTHMA IN SCHOOL CHILDREN

At the suggestion of Dr. E. H. Derrick, Deputy Director of Queensland Institute of Medical Research, a survey of asthma in school children was commenced. The aims of the the survey are twofold, viz.—

- (1) To determine the comparative incidence of asthma in key localities throughout Queensland.
- (2) To determine to what extent the variation in incidence is associated with latitude, altitude, temperature, humidity and rainfall.

The survey is being conducted by analysing the medical history sheets completed by parents at the time pupils in Grade One are examined at school. It is hoped that a comparison of the incidence in various localities will produce valuable information regarding the influence of climatic factors on the disease. A knowledge of where the incidence is unusually high will indicate the need for special investigation.

Sufficient data has not yet been collected to draw any conclusions regarding the influence of locality, but two important facts have emerged from figures collected so far. The overall incidence of asthma amongst 4,737 children in the five and six year age groups was found to be 4.7 per cent. and the incidence in boys (6.3 per cent.) is much higher than in girls (3.6 per cent.). It is hoped that the survey will be completed in twelve months.

SCHOOL DENTAL SERVICES

As with the medical section, the year 1960 marked the completion of fifty years in the life of the School Dental Service of Queensland. During this period, school dentists have given valuable dental treatment to country school children under difficult conditions. The policy has always been to take the treatment to the children, particularly those in remote areas. This policy has necessitated the officers' absence from home for long periods and their working with portable equipment, often in such makeshift surgeries as school verandahs. There have been many improvements over the years. The introduction of the four Rail Dental Clinics enabled dental officers to work in well equipped clinics under improved conditions for patients and operators. Portable electric engines are gradually replacing the old foot operated machine. It is hoped that the forthcoming years will see all dentists equipped with modern equipment and provided with official vehicles. When this does eventuate, there will still remain however, the travelling to remote areas and the problem of accommodation, both personal and operating.

The year under review, has been one of the most satisfactory in the history of School Dental Services, in regard to the number of schools visited, children treated and operations performed. The 587 schools dentally serviced were mainly in distant country areas not served by other dentists. The Rail Dental Clinics included in their itineraries such places as Quilpie, Wyandra, Cooladdi, Duchess, Kajabbi, and many other similar centres. In all, over 70,000 operations were performed in nearly 14,000 children.

Despite this comparatively good record, the frequency of dental visits to schools is not as high as desired. Due to lack of staff an annual dental visit is still not possible. The present shortage of staff would be even more serious were it not for the State Fellowship Holders. Of the present staff of twenty dentists, the Fellowship Holders number twelve. This scheme has resulted in many thousands of school children receiving dental treatment which in many instances, they would not have received.

CO-OPERATION WITH OTHER AGENCIES

School Health Services is only one of many agencies working in the field of Child Health. To obtain the desired investigations, treatment and education for many children examined, it is necessary to elicit the aid of many other departments and associations.

This Branch has a close liaison with the Education Department and particularly with the Research and Guidance Branch. Mutual referral of children not progressing satisfactorily at school has solved many problems during the year.

In the field of hearing the Commonwealth Acoustic Laboratory and the Schools for the Deaf have been very co-operative in cases referred. The Acoustic Laboratory provide this Branch with audiometers for routine testing, examine children and provide hearing aids where necessary. Periodical visits of their officers to Rockhampton, Townsville and Cairns have enabled the more accurate testing of children with hearing losses detected by school sisters during routine school examinations. All children admitted to the Education Department's Oral Deaf School are first examined by an Ascertainment Committee, of which the Chief Medical Officer is a member.

Two new agencies which have been established in recent years have been very helpful with children with special problems. These are the Welfare and Guidance Clinic and the Division of Social Workers. The number of children referred to these divisions has, so far, not been great, but School Health Services will make much greater use of these facilities in the future.

Medical Officers from School Health Services supervised visits of sixth year medical students to handicapped children's institutions. These students are required to study patients at these centres as part of their Social Pediatrics course. Entrants to both Teachers' Colleges were medically examined by the staff of School Health Services.

SALK VACCINATION CAMPAIGN

Although the actual immunisation against poliomyelitis is now carried out by Local Authorities, School Health Services are still responsible for the distribution of Salk vaccine and the new immunising agent, quadruple antigen. In addition, this Branch conducts clinics for adults' immunisation in the metropolitan area. With the completion of the major tasks of immunising the majority of children and approximately half the adults of Queensland in the age range up to forty-five years in previous years, the bulk of the immunisation against poliomyelitis is now in children born since the commencement of the campaign. When cases of the disease occur there is a temporary rush of applicants from the unimmunised older age groups.

Supplies of Salk vaccine were adequate to meet demands till the end of 1960. However, an unfortunate breakdown in production at the Commonwealth Serum Laboratories left Queensland, without supplies during the first half of 1961, except for some emergency stocks which were almost negligible in meeting demand. This demand rose with the occurrence of an increase in the incidence of the disease. This increase in incidence was of a sporadic nature only, but was sufficient to create a desire for protection in many unvaccinated persons. The lack of supplies of Salk vaccine was somewhat offset by the introduction of quadruple antigen, which is used to give protection against poliomyelitis, whooping cough, tetanus and diphtheria in children six months to two years, not previously immunised against any of the diseases. Supplies of this agent were sufficient to meet the demand from the time of its introduction in February, 1961. Approximately 25,000 doses of quadruple antigen have been distributed.

Until the cessation of supplies of Salk vaccine, Local Authorities were carrying out a keen immunisation programme. In the six months of the year that this was possible, the number of new courses commenced, and the number completed in children, was approximately equivalent to half the State's annual birthrate. The numbers of new adults immunised in the latter half of 1960, was not great. It is estimated that approximately eighty-five per cent. of eligible children have commenced either Salk vaccine or quadruple antigen courses. Those who have completed courses would approximate seventy-five per cent. This proportion will rise when supplies are resumed. About half the adult population up to 45 years have completed the recommended course of three injections.

TABLE LXIV
DETAILS OF ROUTINE SCHOOL HEALTH EXAMINATIONS

	Metro-politan	Country	Total
Schools Visited	82	836	918
Children Examined	20,815	70,817	91,632
Children Examined by a School Medical Officer	2,503	4,711	7,214
Children with Defects Requiring Notification	1,134	3,094	4,228
Percentage of Parents who sought Medical Attention after Notification	79	82	80.5

TABLE LXV
APPARENT DEFECTS NOTIFIED

Defect	Metro-politan	Country	Total
Hearing Loss	114	339	453
Defective Vision	556	1,406	1,962
Other Eye Defects	105	331	436
Infected Tonsils	103	315	418
Scrotal and Groin Swellings	59	174	233
Postural Defects	37	76	113
Lower Limb Defects	81	93	174
Heart	7	13	20
Other Defects	72	347	419
Total	1,134	3,094	4,228

TABLE LXVI
COMMUNICABLE DISEASE IN SCHOOL CHILDREN

Diphtheria	2	Typhoid Fever	1
Scarlet Fever	81	Tuberculosis	12
Poliomyelitis	8	Tetanus	5
Lead Poisoning	20	Rheumatic Fever	75
Malaria	4	Infective Hepatitis	289
Meningitis	12	Psittacosis	1

TABLE LXVII

DETAILS OF SCHOOL DENTAL INSPECTIONS

Number of children examined	31,169	Temporary teeth filled	13,572
Number notified for professional attention	8,464	Percentage of children with dirty mouths	11
Number of children under regular dental care—		Total number of defective permanent teeth	53,346
Clinic	960	Average number defective permanent teeth, per child	1.7
School Dental Officer	7,909		
Private Dentist	9,800		
Number with sound mouths—			
Natural	1,536		
Operatively restored	6,173		
Carious permanent teeth (saveable) ..	45,929		
Carious permanent teeth (unsaveable) ..	7,417		
Carious temporary teeth	36,599		
Permanent teeth lost or extracted ..	14,911		
Six year molars extracted	11,720		
Permanent teeth filled	66,505		

Total Dental Treatment 1960

Number of schools visited	587
Number of children examined	31,169
Number of children treated	13,887
Number of extractions	15,132
Number of fillings	27,880
Number of other treatments	20,573
Number of operations	71,684

TABLE LXVIII
SALK VACCINATION CAMPAIGN
INJECTIONS GIVEN DURING 1960-61

—	First Injections	Second Injections	Third Injections	Total
Children (up to 14 years)	15,785	15,169	15,298	46,252
Adults (15 years and over)	4,080	4,064	9,676	17,820

INJECTIONS GIVEN FROM BEGINNING OF CAMPAIGN TO 30TH JUNE, 1960

—	First Injections	Second Injections	Third Injections	Total
Children (up to 14 years)	466,764	435,826	404,732	1,307,322
Adults (15 years and over)	281,062	269,116	229,735	779,913

INJECTIONS GIVEN FROM BEGINNING OF CAMPAIGN TO 30TH JUNE, 1961

—	First Injections	Second Injections	Third Injections	Total
Children (up to 14 years)	482,549	250,995	420,030	1,353,574
Adults (15 years and over)	285,142	273,180	239,411	797,733
Total (all ages)	767,691	724,175	659,441	2,151,307

DIVISION OF MENTAL HYGIENE

Director of Mental Hygiene: B. F. R. STAFFORD, M.B., B.S. (Melb.)
Medical Superintendent, Brisbane Mental Hospital: C. R. BOYCE, M.B., Ch.M. (Syd.)
Medical Superintendent, Toowoomba Mental Hospital: J. H. B. HENDERSON, M.B., B.S. (Syd.)
Medical Superintendent, Ipswich Mental Hospital: R. A. ATHERTON, L.R.C.P. (Edin.), L.R.C.S. (Edin.), L.R.F.P.S. (Glasgow)
Phychiatrist, Psychiatric Clinic: J. A. HEDE, M.B., B.S. (Melb.), D.P.M. (Melb.)
Visiting Medical Officer, Mosman Hall, Charters Towers: J. E. ROBINSON, M.B., B.S. (Qld.)
Superintendent, Epileptic Home: E. G. KENYON
Administration Officer: S. T. G. BEEDHAM, A.A.U.Q.

The past fiscal year has been a period largely occupied by establishing new policies affecting mental hygiene and psychiatry generally in Queensland. It has also been a period of adjustment to new attitudes to our patients.

The policy is proceeding slowly and carefully in all our hospitals so that there are now two wards run on a self-management basis. Custodial supervision is still maintained in certain wards.

OPEN HOSPITALS

This report must emphasise the co-operation that has been given by the staffs of our hospitals. Elsewhere, it had been found that the greatest difficulty in introducing the "Open Hospital" was the feeling of insecurity created in the staff.
The hospitals in Queensland, for many years, have had a "parole" or "honour" system, so that the transition to open wards has been quite simple in respect to several wards.

ACCOMMODATION

The accommodation position has improved in all the hospitals. There is no over-crowding. The patient population has shown further reduction, as the following figures indicate:—

TABLE LXIX
PATIENT POPULATION

	Patients Resident at 30th June, 1960			Patients Resident at 30th June, 1961		
	Females	Males	Total	Females	Males	Total
Brisbane Mental Hospital	920	1,151	2,071	737	1,139	1,876
Toowoomba Mental Hospital	544	576	1,120	534	544	1,078
Ipswich Mental Hospital	226	352	578	325	339	664
Mosman Hall, Charters Towers	..	180	180	..	198	198
Totals	1,690	2,259	3,949	1,596	2,220	3,816

A new female unit was opened at Ipswich on 19th August, 1960. This unit accommodates some 170 patients who are of good social behaviour, but by psychological assessment could be classed as regressed. It is anticipated that many of these patients will respond to the very excellent accommodation and amenities this ward provides.

At Mosman Hall a new ward is nearing completion. Meanwhile, this hospital has two open annexes functioning and a very liberal parole system.

The modernisation of bathrooms, ward kitchens and other facilities at Toowoomba Mental Hospital has been completed. This has provided up-to-date facilities and is very much appreciated by both patients and staff.

MENTAL DEFICIENCY

The number of mentally subnormal patients cared for in our mental hospitals is creating a serious problem. At one stage the numbers of these patients threatened a serious problem of overcrowding.

This has been met in the following ways. A large ward of 95 beds situated at Farm Colony became available. This was occupied by over 70 female children from Ipswich. At the present time this very fine unit consists of a ward for subnormal boys and a ward for subnormal girls.

A pediatric unit for subnormal infants at Chermside has greatly relieved the pressure in the mental hospitals, and has developed into a model unit.

The teaching and training of the mentally subnormal is an urgent matter. With the co-operation of the Association for the care of the mentally subnormal, three teachers are at present undergoing a special training course. At Toowoomba Mental Hospital a small, but increasing, group attend the school at the nearby Epileptic Home.

GERIATRIC PATIENTS

For some years the number of senile patients in our mental hospitals has totalled one-third of all patients resident. Also, the ratio of senile admissions to all admissions has been 33½ per cent. During the past year the situation changed. The ratio of admissions fell to 22 per cent. and the number of senile patients was greatly reduced. For example, in Brisbane Mental Hospital there are 1,151 male patients, of whom 43 are 65 years and over (this figure excludes 33 patients in the Wacol Pavilion). There still remain over 100 patients suitable for Country Annexes or Eventides but whose relatives do not wish them to leave the metropolitan area.

Plans are in hand to find accommodation for these patients and when finalised it would appear that the problem has been solved in respect to caring for old people who were certified and sent to the mental hospital because there was no other place available for them. A Director of Geriatrics has been appointed and it is certain that the modern unit at Princess Alexandra Hospital will further reduce the number of admissions of old folk.

AMENITIES

There has been a decided increase in the activities of Welfare Organisations interested in our mental hospitals. During the year the Queensland Federation of Mental Health was formed. It is understood that this organisation is designed to co-ordinate the activities of the many independent bodies now affiliated with it.

The Open Hospital policy has given greater scope for welfare groups and it is most gratifying to see such a whole-hearted acceptance by the community of this policy. A very pleasing feature has been the formation of "Ward Clubs" by members of the staff. These clubs include staff, patients and friends and they are affiliated with the Federation of Mental Health.

A minor revolution has taken place in the social life of the hospital communities by the introduction of television. There are so many people concerned that it is only possible to say thank you to everyone whose work and generosity has made this amenity possible in most of the wards.

TREATMENT

All hospitals report a decrease of active physical treatments such as insulin and electric shock therapies and an increase of chemotherapies. Knowledge of the special selectivity of tranquillisers has improved and the benefits of their use is evident in all wards.

This, in association with Open Wards, has emphasised the importance of other activities such as occupational therapy and recreational activities. Thanks are extended to the many friends who have provided concerts, entertainments and outings for the patients.

RETURNED SOLDIER PATIENTS

The Repatriation Pavilion at Wacol continues to provide a high standard of accommodation and care. The Anzac Day Ceremony was again a notable occasion. The Repatriation Department and the Sub-branches of the R.S.S.A.I.L.A. associated with each hospital, have continued their interest in these patients. A number of these patients are now in the upper age groups and less able to participate in active diversions. However, they enjoy the regular trips, the wood-working classes and the entertainments held at the Pavilion.

An experiment was commenced whereby all ex-servicemen in the main hospital were grouped in one building consisting of Wards 12 and 13. This venture promises to be successful and it has already simplified the provision of amenities by Organisations specially concerned with the welfare of ex-servicemen.

THE CHAPLAINCY SERVICE

The Mental Hygiene Service is indebted to the Church Authorities whose co-operation has made this Service possible. The Service commenced 2½ years ago and has, without doubt, increased the sympathy of many people for the work being done, as well as ministering to the spiritual needs of patients and relatives.

New residences have been built for the three Chaplains and they were occupied during the past year.

A unique aspect of the Chaplaincy Service is that the Chaplains remain active members of their own Church Organisations and are not members of the Mental Hygiene Service.

Chapels are in the course of erection and when completed will make the religious aspect of the hospital more realistic and should make the Chaplains' duties more satisfying to patients and clergy alike.

STAFF

Probably the most important event was the official trip to New Zealand of the Medical Superintendent, Brisbane Mental Hospital, Dr. C. R. Boyce. The courtesies extended to Dr. Boyce by Dr. Blake-Palmer and his Officers are sincerely appreciated.

Visits by Senior Officers are very important and it is certain that this visit by Dr. Boyce will make the implementation much easier of recommendations following the visit of the Director of Mental Hygiene overseas.

Toowoomba Mental Hospital has not been able to fill the post of Psychologist.

Three new Doctors have joined the staff of Brisbane Mental Hospital—Dr. J. N. Trout, Dr. S. Gottlieb, and Dr. W. P. Hurley, D.P.M.

PSYCHIATRIC CLINIC

The Psychiatric Clinic now functions for adults only since the establishment of a separate Child Guidance Section. There has been a consequent reduction in total numbers of patients seen compared with 1960 but an increase in the number of adult patients. During the year 1959-60, there were 201 patients under 19 years and during the past year there were 52. There have been no significant variations between male and female patients.

During the past year twice as many patients continued treatment as in previous year—437 as compared to 211. This is significant and is one of the factors reducing admissions to mental hospitals. There has been an increase in the number of psychiatric consultations compared to previous year. This also indicates a greater number of patients being retained as out-patients instead of being admitted to hospitals.

This Clinic also functions in close association with the Prisons and Justice Department. Forensic psychiatry has improved by the appointment of Dr. N. V. Youngman as Visiting Psychiatrist. This appointment will enable psychiatric examinations to be made during or before trial. The Psychiatric Clinic will continue to assist in regard to convicted persons.

EPILEPTIC HOME

The character of this Home has gradually changed over the past years. The patient whose seizures prevented participation in primary schools and common community activities, but is not intellectually impaired, is not presenting for admission. These people must be effectively treated in the community. Today the Home is essentially serving epileptic patients who are also intellectually retarded, but in general have a good pattern of social conduct. This development provokes the consideration of a group of mentally retarded patients in mental hospitals who would be suitable patients for the Home or a similar Institution as to behaviour, but they do not suffer from Epilepsy.

Appreciation is expressed to Miss Dorothy King for her many years of excellent work in the School. An extract from the School Inspector (Department of Education) reads "work is planned according to each child's wavering temperament and changing capabilities, but it is clearly apparent that the teacher's time is fully occupied in studying and eliciting the interests, capabilities and the immediate needs of each individual."

INTEGRATION OF PSYCHIATRIC SERVICES

The emphasis now placed on psychiatric services in General Hospitals has contributed in no small measure to the reduced admissions to our Mental Hospitals. A further development has been the inauguration of a scheme whereby Two Medical Officers will do a four months' tour of full-time duty as Registrars in the Psychiatric Service of the Brisbane General Hospital.

Discussions have taken place with the General Medical Superintendant with the view of further development of the existing Psychiatric Services and to ensure that Medical Officers will be able to obtain experience in all the psychiatric clinical areas. It is expected that recommendations for special out-patient facilities for the Psychiatric Service will be approved. Tenders have been called for the construction of the Neuropsychiatric Hospital at Chermside.

This Hospital is planned to operate in close association with the Brisbane General and Brisbane Mental Hospitals and to provide for patients requiring longer hospital treatment. At present between 200-300 patients are certified and admitted to Brisbane Mental Hospital and recover in 2-5 months.

Plans are under consideration to construct a Psychiatric Unit at the Townsville General Hospital to replace the existing accommodation and it is hoped this unit will prove to be the prototype of Psychiatric Units at other Base Hospitals.

Discussions have been held with University and Hospital Authorities and it is anticipated that ways and means will be found to construct a block of University Teaching Units which will include a University Teaching Unit in Psychiatry.

TABLE LXX

QUEENSLAND MENTAL HOSPITALS

SHOWING ADMISSIONS, RE-ADMISSIONS, DISCHARGES AND DEATHS, DURING THE YEAR ENDED 30TH JUNE, 1961

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers		Totals	
	Males		Females	Totals		Males	Females		Totals	Males		Males	Females
On the Books of the Hospitals on 1st July, 1960	1,232	1,077	2,309	594	585	1,179	356	228	584	190	2,372	1,890	4,262
Admitted for the first time { certified	226	249	475	38	26	64	22	2	24	59	345	277	622
{ voluntary	62	43	105	55	46	101	10	9	19	16	143	98	241
Re-admitted { certified	114	147	261	27	29	56	..	..	..	17	158	176	334
{ voluntary	44	62	106	18	18	36	..	..	..	8	70	80	150
Total Admissions	446	501	947	138	119	257	32	11	43	100	716	631	1,347
Totals on Books and Admissions—All Hospitals	1,678	1,578	3,256	732	704	1,436	388	239	627	290	3,088	2,521	5,609
Transferred from Brisbane	..	..	..	1	34	35	..	162	162	13	14	196	210
Transferred from Toowoomba	..	..	..	..	..	..	..	..	..	..	6	2	8
Transferred from Ipswich	27	59	86	..	..	..	..	..	..	..	27	59	86
Transferred from Mosman Hall	4	..	4	..	..	..	..	..	..	..	4	..	4
*Total number under care during the year	1,715	1,639	3,354	733	738	1,471	388	401	789	303	3,139	2,778	5,917
†Discharged—													
Recovered	61	104	165	47	61	108	3	..	3	67	178	165	343
Relieved	226	246	472	16	20	36	..	..	..	7	249	266	515
Not Improved	36	22	58	25	32	57	3	4	7	1	65	58	123
Voluntarily left	58	60	118	43	24	67	..	..	..	3	104	84	188
Total Discharges	381	432	813	131	137	268	6	4	10	78	596	573	1,169
Died	65	84	149	29	26	55	12	6	18	10	116	116	232
Total Number Discharged and Died	446	516	962	160	163	323	18	10	28	88	712	689	1,401
Transferred to Brisbane	..	..	..	6	2	8	27	59	86	4	37	61	98
Transferred to Toowoomba	1	34	35	..	..	..	..	..	..	..	1	34	35
Transferred to Ipswich	..	162	162	..	..	..	..	..	..	..	..	162	162
Transferred to Mosman Hall	13	..	13	..	..	..	..	..	..	..	13	..	13
Total number discharged, died, &c., during year	460	712	1,172	166	165	331	45	69	114	92	763	946	1,709
Remaining on Books of Hospitals on 30th June, 1961	1,255	927	2,182	567	573	1,140	343	332	675	211	2,376	1,832	4,208
Average Number Daily Resident	1,135	833	1,968	547	524	1,071	335	272	607	196	2,213	1,629	3,842
Number on leave of absence on 30th June, 1961	116	190	306	23	39	62	4	7	11	13	156	236	392
Proportion of Mentally Sick to each 1,000 of population as at 30th June, 1961	..	..	..	..	..	..	..	..	..	..	3.14	2.54	2.85
Proportion of Admissions per 10,000 of population for year ended 30th June, 1961	..	..	..	..	..	..	..	..	..	..	9.47	8.75	9.12

* These totals include interhospital transfers.

† Includes Section 49 Discharges as shown—

Recovered	1	3	4	2	18	20	..	..	..	..	3	21	24
Relieved	14	42	56	4	4	8	..	..	..	1	19	46	65
Not Improved	4	..	4	1	..	1	..	..	..	..	5	..	5
	19	45	64	7	22	29	..	..	..	1	27	67	94

TABLE LXXI
ADMISSIONS, DISCHARGES, AND DEATHS, WITH THE PROPORTIONS OF RECOVERIES AND DEATHS PER CENT. DURING
THE YEAR ENDED 30TH JUNE, 1961

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Total Admissions ..	446	501	947	138	119	257	32	11	43	100	716	631	1,347
*Discharged—													
Recovered ..	62	115	177	75	73	148	3	..	3	67	207	188	395
Relieved ..	272	293	565	28	28	56	..	..	..	10	310	321	631
Not Improved ..	47	24	71	29	35	64	3	4	7	1	80	63	143
Died	65	84	149	29	26	55	12	6	18	10	116	116	232
Average Number													
Daily Resident ..	1,135	883	1,968	547	524	1,071	335	272	607	196	2,213	1,629	3,842
Percentage of Recoveries on Admissions ..	13.90	22.95	18.69	54.34	61.34	57.58	9.37	..	6.97	67.0	28.91	29.79	29.32
Percentage of Patients Relieved on Admissions	60.99	58.48	59.66	22.89	23.52	21.78	..	..	..	10.0	43.29	50.87	46.84
Percentage of Deaths on Average Number Resident	5.73	10.08	7.57	5.30	4.96	5.18	3.58	2.2	2.97	5.10	5.24	7.12	6.04

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE LXXII
FORMS OF MENTAL DISORDERS IN PATIENTS ADMITTED DURING THE TWELVE MONTHS ENDED 30TH JUNE, 1961

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall Charters Towers	Totals		
	Males	Fe- males	Totals	Males	Fe- males	Totals	Males	Fe- males	Totals	Males	Males	Fe- males	Totals
1. AFFECTIVE REACTION TYPES—													
(a) Manic Depressive Psy- chosis	11	44	55	2	6	8	..	..	..	..	13	50	63
(b) Mania	1	..	1	3	..	3	..	..	..	3	7	..	7
(c) Depression	10	23	33	24	10	34	..	..	..	1	35	33	68
Reactive Depression ..	7	5	12	1	3	4	..	..	..	1	9	8	17
Recurrent Depression ..	2	1	3	..	..	..	..	..	..	..	2	1	3
Hypomania	4	8	12	..	1	1	..	..	..	..	4	8	12
(d) Involutional Depression	1	1	2	..	7	7	..	..	..	..	1	1	2
Paranoid Reaction ..	..	..	..	4	1	5	..	..	..	2	6	1	7
Involutional Melancholia ..	1	5	6	..	..	..	..	..	..	..	1	5	6
2. SCHIZOPHRENIC REACTION TYPES—													
(a) Schizoid Personality ..	1	..	1	..	..	..	..	..	..	..	1	..	1
Schizophrenia	116	144	260	28	22	50	10	..	10	27	181	166	347
Schizophrenia Paranoid Type	57	..	57	..	..	..	2	..	2	7	66	..	66
Hebephrenia	..	..	..	..	..	..	..	..	..	..	..	..	..
(b) Paraphrenia	2	13	15	6	5	11	..	..	..	4	12	18	30
Catatonia	4	1	5	..	..	..	..	..	..	2	6	1	7
(c) Paranoid Reaction ..	3	27	30	..	..	..	..	..	..	..	3	27	30
3. ORGANIC REACTION TYPES—													
(a) Organic Dementia ..	13	4	17	..	..	..	..	..	..	1	14	4	18
Organic Psychosis ..	4	1	5	1	..	1	..	..	..	..	5	1	6
Hydrocephalus	..	..	..	..	..	..	..	..	..	..	..	..	..
Kernicterus	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Atrophy	2	..	2	..	..	..	..	..	..	..	2	..	2
(b) Toxins—													
Acute Toxic Psychosis ..	..	1	1	..	..	..	..	..	..	..	..	1	1
Acute Alcoholism	..	5	5	..	..	..	..	..	..	..	..	5	5
Alcoholic Hallucinosi	1	..	1	..	..	..	..	..	..	5	6	..	6
Alcoholic Psychosis ..	1	..	1	1	1	2	..	..	..	6	8	1	9
Puerperal Psychosis ..	..	..	..	..	1	1	..	..	..	..	..	1	1
Alcoholic Psychosis (Kor- sakov's)	..	..	..	..	..	..	..	..	..	6	6	..	6
Cerebral Syphilis	..	..	..	..	..	..	..	..	..	..	..	..	..
Alcoholism	18	..	18	17	3	20	..	..	..	5	40	3	43
Acute Confusional Psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..
(c) Arteriosclerotic Dementia	13	3	16	3	1	4	..	..	..	..	16	4	20
Arteriosclerotic Psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Presenile Dementia	..	1	1	..	..	..	..	..	..	1	1	1	2
Cerebral Arteriosclerosis	..	..	..	..	..	..	..	..	..	1	1	..	1
Senile Dementia	43	85	128	14	9	23	..	1	1	3	60	95	115
Senile Psychosis	6	5	11	5	7	12	1	..	1	..	12	12	24
Post Encephalitic	..	..	..	..	..	..	..	..	..	..	..	..	..
Parkinsonism	..	..	..	..	..	..	1	..	1	..	1	..	1
Senile Depressive	..	..	..	..	..	..	..	..	..	..	..	..	..
4. EPILEPTIC REACTION TYPES—													
Epileptic Psychosis ..	..	2	2	3	1	4	..	..	..	1	3	3	6
Epilepsy	7	13	20	10	5	15	..	..	..	..	18	18	36
Epilepsy with Schizophrenia	..	1	1	..	..	..	..	..	..	..	..	1	1
5. PSYCHONEUROTIC REACTION TYPES—													
Psychoneurosis	5	10	15	1	10	11	..	..	..	1	7	20	27
Anxiety State	13	34	47	4	8	12	..	..	..	1	18	42	60
Hysteria	4	9	13	1	2	3	..	..	..	3	8	11	19
Obsessive	..	1	1	..	..	..	..	..	..	..	..	1	1
Neurasthenia	..	..	..	..	..	..	..	..	..	..	..	..	..
Depression	8	..	8	..	..	..	..	..	..	4	12	..	12
Emotional Instability ..	..	..	..	1	..	1	..	..	..	..	1	..	1
6. MENTAL DEFICIENCY—													
(a) Mental Deficiency ..	26	23	49	3	10	13	..	..	..	1	30	33	63
With Epilepsy	5	1	6	2	..	2	2	..	2	2	11	1	12
Moron	..	..	..	..	..	..	1	2	3	..	1	2	3
Mongol	4	..	4	..	..	..	2	1	3	..	6	1	7
With Schizophrenia ..	8	1	9	..	..	..	..	..	..	..	8	1	9
(b) Idiocy	1	..	1	..	..	..	4	2	6	..	5	2	7
(c) Postencephalitic Idiocy ..	..	..	..	..	..	..	..	1	1	..	..	1	1
(d) Microcephalic Idiocy ..	..	..	..	..	..	..	..	..	..	..	..	..	..
(e) Imbecility	..	..	..	..	..	..	4	4	8	..	4	4	8
Postmeningitic	..	..	..	..	..	..	..	..	..	1	1	..	1
Schilders Disease	..	..	..	..	..	..	1	..	1	..	1	..	1
7. ADDICTION—													
Chronic Alcoholism ..	26	11	37	..	3	3	2	..	2	10	38	11	49
Drug	..	3	3	..	..	..	..	..	..	..	..	6	6
8. PSYCHOPATHIC PERSONALITY													
9. TRAUMATIC PSYCHOSIS ..	3	..	3	..	..	..	..	..	..	..	4	..	4
Totals	446	501	947	138	119	257	32	11	43	100	716	631	1,347

TABLE LXXIII

CAUSES OF DEATHS WHICH OCCURRED DURING PERIOD ENDED 30TH JUNE, 1961

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe- males	Totals	Males	Fe- males	Totals	Males	Fe- males	Totals	Males	Males	Fe- males	Totals
GENERAL DISEASES—													
Addisons Disease	..	..	..	..	1	1	..	..	..	..	..	1	1
Septicaemia	..	..	..	..	..	..	..	..	..	..	..	..	..
Sarcoma of Eye	..	..	..	..	..	..	..	..	..	..	..	..	..
Toxæmia	1	..	1	..	..	..	..	..	..	..	1	..	1
Carcinoma of Breast	..	1	1	..	..	..	..	..	..	..	..	1	1
Cirrhosis of Liver	..	..	..	..	..	..	..	..	..	..	..	..	..
Diabetes Mellitus	..	..	..	..	..	..	..	..	..	..	..	..	..
Dementia Paralytica	..	..	..	..	..	..	..	..	..	..	..	..	..
Asphyxiation	3	..	3	..	..	..	..	..	..	..	3	..	3
Senile Dementia	..	1	1	..	..	..	..	..	..	..	..	1	1
Chronic Interstitial Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..
Ulcer Decubitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Tertiary Lues	..	..	..	..	..	..	..	..	..	..	..	..	..
Schizophrenic Deterioration	..	..	..	..	..	..	..	..	..	..	..	..	..
Gangrene of Foot	..	..	..	..	..	..	..	..	..	..	..	..	..
Cachexia	..	..	..	..	..	..	..	..	..	..	..	..	..
Strangulation Femoral	..	..	..	..	..	..	..	..	..	..	..	..	..
Hernia	1	..	1	..	..	..	..	..	..	..	1	..	1
Burns	..	1	1	..	..	..	..	..	..	..	..	1	1
											5	4	9
DISEASES OF THE NERVOUS SYSTEM—													
Cerebral Degeneration	1	1	2	2	..	2	3	3	6	..	6	4	10
Cerebral Thrombosis	3	1	4	..	..	..	1	..	1	..	4	1	5
Cerebral Haemorrhage	1	2	3	..	..	..	..	..	..	..	1	2	3
Cerebral Arteriosclerosis	1	..	1	..	..	..	..	..	..	..	1	..	1
Epilepsy	..	..	..	..	..	..	..	..	..	..	..	..	..
Hydrocephalus	..	..	..	..	..	..	1	..	1	..	1	..	1
Status Epilepticus	..	..	..	..	..	..	..	..	..	..	..	..	..
Huntington's Chorea	..	..	..	..	..	..	..	..	..	..	..	..	..
Subarachnoid Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Metastasis	..	..	..	..	..	..	..	..	..	..	..	..	..
Intercranial Haemorrhage	..	..	..	..	..	..	..	..	..	..	..	..	..
Cerebral Trauma	..	..	..	..	1	1	..	..	..	..	..	1	1
Meningitis	..	..	..	..	..	..	..	1	1	..	..	1	1
											13	9	22
DISEASES OF THE CIRCULATORY SYSTEM—													
Cardio Vascular Degeneration	19	16	35	6	5	11	2	1	3	..	27	22	49
Coronary Occlusion	4	2	6	..	5	5	1	..	1	..	5	7	12
Acute Myocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Myocardial Degeneration	1	3	4	..	1	1	..	..	..	..	1	4	5
Coronary Thrombosis	..	..	..	5	3	8	..	..	..	..	5	3	8
Toxic myocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Myocardial Infarction	2	4	6	..	..	..	..	..	..	1	3	4	7
Auricular Fibrillation	2	1	3	..	..	..	..	..	..	..	2	1	3
Chronic Myocarditis	..	..	..	..	..	..	..	..	..	..	..	..	..
Congestive Cardiac Failure	3	6	9	5	..	5	2	..	2	..	10	6	16
Left Ventricular Failure	..	..	..	2	..	2	..	..	..	..	2	..	2
Cardiac Failure	1	..	1	..	..	..	..	..	..	..	1	..	1
Congenital Cardiac Failure	1	..	1	..	..	..	..	..	..	..	1	..	1
Myocardial Insufficiency	..	..	..	..	..	..	..	..	..	..	..	..	..
Rheumatic Heart Disease	..	..	..	..	..	..	..	..	..	..	..	..	..
Ludwigs Angina	..	1	1	..	..	..	..	..	..	..	..	1	1
Septic Endocarditis	..	..	..	..	..	..	1	..	1	..	1	..	1
Cerebral Thrombosis	..	..	..	2	1	3	..	..	..	..	2	1	3
											60	49	109
DISEASES OF THE RESPIRATORY SYSTEM—													
Broncho Pneumonia	17	26	43	5	1	6	1	1	2	..	23	28	51
Lobar Pneumonia	..	5	5	..	..	..	..	..	..	..	..	5	5
Pulmonary Thrombosis	..	..	..	..	..	..	..	..	..	..	..	..	..
Terminal Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..
Pneumonia	..	2	2	..	6	6	..	..	..	3	3	8	11
Cardiac Asthma	..	..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis	2	..	2	..	..	..	..	..	..	..	2	..	2
Carcinoma of Lung	..	..	..	..	..	..	..	..	..	..	..	..	..
Lung Abscess	..	..	..	..	..	..	..	..	..	..	..	..	..
Empyæma	..	1	1	..	..	..	..	..	..	..	..	1	1
Hypostatic Pneumonia	..	..	..	..	..	..	..	..	..	2	2	..	2
Status Asthmaticus	..	1	1	..	..	..	..	..	..	..	..	1	1
Pulmonary Embolism	..	1	1	..	..	..	..	..	..	..	..	1	1
Inhalation Vomitos	..	3	3	..	..	..	..	..	..	..	..	3	3
											30	47	77
DISEASES OF THE ALIMENTARY SYSTEM—													
Carcinoma of Pancreas	1	1	2	..	..	..	..	..	..	1	1	1	2
Gastroenteritis	..	..	..	..	..	..	..	..	..	..	1	..	1
Carcinoma of Rectum	..	..	..	..	..	..	..	..	..	..	..	..	..
Gastric Carcinoma	..	..	..	1	..	1	..	..	..	..	1	..	1
Megacolon	..	..	..	..	..	..	..	..	..	..	..	..	..
Obstruction of Oesophagus	..	..	..	..	..	..	..	..	..	..	..	..	..
Hepatitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Colon	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Stomach	..	..	..	1	..	1	..	..	..	..	1	..	1
Ulcerative Colitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Peritonitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Peptic Ulcer	..	..	..	..	..	..	..	..	..	..	..	..	..
Obstruction of Bowel	..	..	..	..	..	..	..	..	..	..	..	..	..
Enteritis	..	..	..	..	1	1	..	..	..	..	..	1	1
Delirium Tremens	..	..	..	..	..	..	..	..	..	2	1	..	1
Paralytic Ileus	..	..	..	..	..	..	..	..	..	2	2	..	2
											7	2	9
DISEASES OF THE GENITO-URINARY SYSTEM—													
Prostitis and Cystitis	..	..	..	..	..	..	..	..	..	..	..	..	..
Chronic Nephritis	1	1	2	..	..	..	..	..	..	..	1	1	2
Adenocarcinoma Uteri	..	2	2	..	..	..	..	..	..	..	..	2	2
Granulosa-cell Tumor of Ovary	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Urinary Bladder	..	..	..	..	..	..	..	..	..	..	..	..	..
Carcinoma of Prostate	..	..	..	..	..	..	..	..	..	..	..	..	..
Acute Pylo Nephritis	..	..	..	..	..	..	..	..	..	..	..	..	..
Polycystic Disease of Kidneys	..	..	..	..	..	..	..	..	..	..	..	..	..
Uraemia	..	1	1	..	..	..	..	..	..	..	..	1	1
Death whilst on leave	..	..	..	..	1	1	..	..	..	..	..	1	1
											1	5	6
Totals	65	84	149	29	26	55	12	6	18	10	116	116	232

TABLE LXXIV

BODILY HEALTH AND CONDITION OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1961

	Erisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
In apparently good health and condition	215	173	388	97	79	176	27	10	37	66	405	262	667
In indifferent health and reduced condition	183	265	448	26	30	56	4	1	5	34	247	296	543
In bad health and exhausted condition..	48	63	111	15	10	25	1	..	1	..	64	73	137
Totals ..	446	501	947	138	119	257	32	11	43	100	716	631	1,347

TABLE LXXV

BIRTH PLACES OF PATIENTS ADMITTED DURING PERIOD ENDED 30TH JUNE, 1961

—	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Queensland	249	334	583	88	78	166	17	8	25	43	397	420	817
New South Wales ..	43	57	100	20	15	35	6	1	7	4	73	73	146
Victoria	14	11	25	5	2	7	1	..	1	5	25	13	38
South Australia ..	6	1	7	1	1	2	1	..	1	2	10	2	12
Western Australia ..	1	3	4	..	..	..	..	..	..	4	5	3	8
Tasmania	5	3	8	..	..	..	1	..	1	1	7	3	10
Northern Territory ..	..	..	..	..	..	..	..	..	..	..	..	..	..
New Zealand.. ..	4	5	9	..	1	1	..	..	..	..	4	6	10
England	26	24	50	8	4	12	1	..	1	9	44	28	72
Scotland	11	8	19	1	2	3	..	1	1	4	16	11	27
Ireland	16	12	28	1	..	1	..	..	..	1	18	12	30
Wales	..	..	..	..	..	..	..	..	..	..	..	..	..
India	3	1	4	..	..	..	..	..	..	..	3	1	4
Latvia	2	1	3	..	1	1	..	..	..	..	2	2	4
Rumania	2	..	2	..	..	..	..	..	..	..	2	..	2
Germany	5	11	16	..	..	..	..	1	1	1	6	12	18
Sweden	..	1	1	..	..	..	..	..	..	1	1	1	2
Italy	4	2	6	..	1	1	..	..	..	7	11	3	14
Holland	3	3	6	..	3	3	..	..	..	..	3	6	9
Poland	5	2	7	4	..	4	1	..	1	2	12	2	14
Norway	1	1	2	..	..	..	..	..	..	..	1	1	2
Russia	1	2	3	..	..	..	..	..	..	..	1	2	3
Hungary	2	..	2	..	..	..	..	..	..	..	2	..	2
Czechoslovakia ..	3	..	3	..	..	..	2	..	2	1	6	..	6
United States of America ..	4	1	5	..	..	..	..	..	..	1	5	1	6
Hong Kong	..	..	..	..	1	1	..	..	..	..	..	1	1
Greece	1	..	1	..	..	..	1	..	1	1	3	..	3
Ukraine	4	2	6	..	..	..	..	..	..	..	4	2	6
France	..	3	3	..	2	2	..	..	..	..	..	5	5
Bulgaria	1	..	1	..	..	..	..	..	..	..	1	..	1
Austria	..	..	..	..	..	..	..	..	..	..	..	..	..
South Africa	..	..	..	..	..	..	..	..	..	..	..	..	..
Yugoslavia	5	3	8	..	..	..	1	..	1	2	8	3	11
Malta	..	1	1	..	..	..	..	..	..	1	1	1	2
Falkland Islands ..	..	1	1	..	..	..	..	..	..	..	..	1	1
Persia	1	..	1	..	..	..	..	..	..	..	1	..	1
Canada	..	1	1	..	..	..	..	..	..	..	..	1	1
Denmark	2	1	3	..	..	..	..	..	..	1	3	1	4
Finland	..	..	..	..	..	..	..	..	..	2	2	..	2
West Indies	1	1	2	..	..	..	..	..	..	..	1	1	2
Lithuania	1	..	1	..	..	..	..	..	..	..	1	..	1
China	..	2	2	..	..	..	..	..	..	..	..	2	2
Sicily	1	..	1	..	..	..	..	..	..	..	1	..	1
Malaya	..	1	1	..	..	..	..	..	..	..	..	1	1
Indonesia	..	..	..	1	1	2	..	..	..	..	1	1	2
Switzerland	..	..	..	..	..	..	..	..	..	1	1	..	1
Unknown	19	2	21	9	7	16	..	..	..	6	34	9	43
Totals ..	446	501	947	138	119	257	32	11	43	100	716	631	1,347

TABLE LXXVI
DISTRICTS WHENCE PATIENTS WERE RECEIVED DURING THE YEAR ENDED 30TH JUNE, 1961

	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Northern and North-Western	15	31	46	2	4	6	7	1	8	100	124	36	160
Central	18	25	43	..	1	1	2	1	3	..	20	27	47
Southern and South-Western	413	445	858	136	114	250	23	9	32	..	572	568	1,140
Totals ..	446	501	947	138	119	257	32	11	43	100	716	631	1,347

TABLE LXXVII
GENERAL CLASSIFICATION OF OCCUPATIONS OF PATIENTS ADMITTED DURING THE YEAR ENDED 30TH JUNE, 1961

Occupations	Brisbane Mental Hospital			Toowoomba Mental Hospital			Ipswich Mental Hospital			Mosman Hall, Charters Towers	Totals		
	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Fe-males	Totals	Males	Males	Fe-males	Totals
Rural Industries ..	20	..	20	29	..	29	..	..	..	12	61	..	61
Secondary Industries, Trades, &c.—													
Building Construction ..	20	..	20	6	..	6	..	..	..	4	30	..	30
Machinery and Electrical ..	32	..	32	3	..	3	2	..	2	11	48	..	48
Foodstuffs, Meat, &c.	7	7	14	1	..	1	1	..	1	4	13	7	20
Clothing, Retail, &c.	4	5	9	..	..	..	..	..	..	3	7	5	12
Mining	2	..	2	..	..	..	..	..	..	5	7	..	7
Transport	8	..	8	3	..	3	..	..	..	3	14	..	14
Clerical	13	14	27	1	3	4	1	..	1	2	17	17	34
Domestic Employment	..	299	299	..	94	94	..	..	..	..	..	393	393
Private Employment	..	..	..	7	..	7	..	..	..	1	8	..	8
Miscellaneous Employment ..	172	15	187	45	1	46	8	..	8	41	266	16	282
No Occupation, and Pensioners ..	138	149	287	37	15	52	..	2	2	4	179	166	345
Professions	9	12	21	..	..	..	..	..	..	..	9	12	21
Children	21	..	21	6	6	12	14	9	23	3	44	15	59
Unknown	..	..	..	..	..	..	6	..	6	7	13	..	13
Totals ..	446	501	947	138	119	257	32	11	43	100	716	631	1,347

TABLE LXXVIII

AGE GROUPS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES, OR DEATHS OCCURRED DURING THE YEAR, AND THOSE WHO REMAINED IN THE HOSPITAL ON 30TH JUNE, 1961

Age Group	Admissions			* Discharges						Deaths			Remaining		
				Recovered			Relieved and not Improved								
	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total
BRISBANE MENTAL HOSPITAL															
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
years and under 10 years	3	..	3	..	..	..	..	..	..	..	..	..	29	30	59
years and under 15 years	18	10	28	1	..	1	7	1	8	1	..	1	55	31	86
years and under 20 years	19	20	39	1	2	3	14	12	26	..	..	..	57	37	94
years and under 30 years	69	56	125	10	18	28	48	30	78	6	2	8	135	71	206
years and under 40 years	103	111	214	18	31	49	87	55	142	6	2	8	250	174	424
years and under 50 years	88	107	195	20	23	43	60	80	140	8	7	15	274	216	490
years and under 60 years	49	70	119	8	16	24	35	51	86	12	10	22	256	195	451
years and under 70 years	29	52	81	4	17	21	27	53	80	16	17	33	159	84	243
years and under 80 years	37	37	74	..	6	6	29	22	51	15	21	36	32	64	96
years and under 90 years	28	33	61	..	2	2	10	12	22	1	21	22	8	23	31
years and over	3	4	7	..	..	..	2	1	3	..	4	4	..	2	2
known	..	1	1	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Brisbane Mental Hospital	446	501	947	62	115	177	319	317	636	65	84	149	1,255	927	2,182
TOOWOOMBA MENTAL HOSPITAL															
Under 5 years	1	..	1	..	..	..	1	..	1	..	..	..	1	1	2
years and under 10 years	2	..	2	..	..	..	2	..	2	..	..	..	4	4	8
years and under 15 years	3	6	9	1	2	3	1	..	1	..	1	1	8	16	24
years and under 20 years	8	1	9	5	1	6	6	2	8	1	..	1	23	12	35
years and under 30 years	21	17	38	11	12	23	8	7	15	1	..	1	28	43	71
years and under 40 years	30	24	54	21	17	38	8	5	13	3	..	3	77	67	144
years and under 50 years	19	22	41	13	15	28	4	4	8	1	1	2	101	108	209
years and under 60 years	16	23	39	12	15	27	3	9	12	2	4	6	144	164	308
years and under 70 years	15	8	23	10	10	20	2	21	23	8	7	15	116	100	216
years and under 80 years	15	10	25	2	2	4	15	12	27	9	6	15	51	48	99
years and under 90 years	6	7	13	..	..	..	6	3	9	2	6	8	8	6	14
years and over	2	1	3	..	..	..	1	..	1	2	1	3	2	2	4
known	..	..	..	..	..	..	..	..	..	..	..	..	4	2	6
Totals, Toowoomba Mental Hospital ..	138	119	257	75	74	149	56	63	119	29	26	55	567	573	1,140
IPSWICH MENTAL HOSPITAL															
Under 5 years	5	6	11	..	..	..	..	..	..	..	..	..	10	7	17
years and under 10 years	7	1	8	..	..	..	2	1	3	1	1	2	33	16	49
years and under 15 years	2	2	4	..	..	..	..	..	..	2	1	3	24	22	46
years and under 20 years	1	..	1	..	..	..	..	..	..	3	1	4	23	21	44
years and under 30 years	5	1	6	..	..	..	..	1	1	..	1	1	42	32	74
years and under 40 years	7	..	7	3	..	3	1	..	1	..	..	..	29	30	59
years and under 50 years	3	..	3	..	..	..	..	1	1	1	..	1	31	50	81
years and under 60 years	..	..	..	..	..	..	..	..	..	..	1	1	57	50	107
years and under 70 years	1	..	1	..	..	..	..	..	..	3	1	4	59	58	117
years and under 80 years	1	1	2	..	..	..	..	1	1	1	..	1	29	41	70
years and under 90 years	..	..	..	..	..	..	..	..	..	1	..	1	5	4	9
years and over	..	..	..	..	..	..	..	..	..	..	..	..	1	1	2
known	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals, Ipswich Mental Hospital	32	11	43	3	..	3	3	4	7	12	6	18	343	332	675
MOSMAN HALL															
Under 5 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
years and under 10 years	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
years and under 15 years	2	..	2	..	..	..	1	..	1	..	..	..	1	..	1
years and under 20 years	1	..	1	..	..	..	..	..	..	..	..	..	6	..	6
years and under 30 years	15	..	15	10	..	10	3	..	3	..	..	..	20	..	20
years and under 40 years	29	..	29	22	..	22	2	..	2	1	..	1	47	..	47
years and under 50 years	24	..	24	16	..	16	3	..	3	1	..	1	51	..	51
years and under 60 years	9	..	9	10	..	10	..	..	..	..	..	..	36	..	36
years and under 70 years	13	..	13	7	..	7	..	..	..	2	..	2	29	..	29
years and under 80 years	3	..	3	2	..	2	1	..	1	4	..	4	15	..	15
years and under 90 years	1	..	1	..	..	..	1	..	1	2	..	2	3	..	3
years and over	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
known	3	..	3	..	..	..	..	..	..	..	..	..	2	..	2
Totals, Mosman Hall, Charters Towers ..	100	..	100	67	..	67	11	..	11	10	..	10	211	..	211
Grand Totals, All Hospitals	716	631	1,347	207	189	396	389	384	773	116	116	232	2,376	1,832	4,208

*For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE LXXIX

MARITAL STATUS OF PATIENTS WHOSE ADMISSIONS, DISCHARGES AND DEATHS OCCURRED DURING THE YEAR AND OF PATIENTS WHO REMAINED IN HOSPITAL ON 30TH JUNE, 1961

Marital Status	Admissions			*Discharges						Deaths			Remaining			
				Recovered			Relieved and not Improved									
	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	Males	Fe- males	Total	
BRISBANE MENTAL HOSPITAL																
Single	260	144	404	27	24	51	183	86	269	28	19	47	992	501	1,493	
Married	142	252	394	32	75	107	107	164	271	29	23	52	220	355	575	
Widowed	28	98	126	..	15	15	19	58	77	8	41	49	16	53	69	
Divorced	10	7	17	2	1	3	9	9	18	..	..	..	9	14	23	
Unknown	6	..	6	1	..	1	1	..	1	..	1	1	18	4	22	
Totals, Brisbane Mental Hospital	446	501	947	62	115	177	319	317	636	65	84	149	1,255	927	2,182	
TOOWOOMBA MENTAL HOSPITAL																
Single	63	31	94	31	12	43	29	20	49	14	12	26	480	333	813	
Married	55	77	132	37	57	94	18	34	52	9	3	12	57	185	242	
Widowed	19	11	30	5	5	10	6	9	15	5	11	16	15	32	47	
Divorced	1	..	1	2	..	2	1	..	1	1	..	1	3	17	20	
Unknown	..	..	..	..	..	..	2	..	2	..	..	..	12	6	18	
Totals, Toowoomba Mental Hospital	138	119	257	75	74	149	56	63	119	29	26	55	567	573	1,140	
IPSWICH MENTAL HOSPITAL																
Single	28	10	38	2	..	2	3	3	6	9	5	14	297	216	513	
Married	1	..	1	1	..	1	..	1	1	1	1	2	29	74	103	
Widowed	2	1	3	..	..	..	..	..	..	1	..	1	7	33	40	
Divorced	..	..	..	..	..	..	..	..	..	1	..	1	3	8	11	
Unknown	1	..	1	..	..	..	..	..	..	..	..	..	7	1	8	
Totals, Ipswich Mental Hospital	32	11	43	3	..	3	3	4	7	12	6	18	343	332	675	
MOSMAN HALL																
Single	65	..	65	45	..	45	8	..	8	4	..	4	168	..	168	
Married	28	..	28	19	..	19	1	..	1	5	..	5	27	..	27	
Widowed	1	..	1	2	..	2	2	..	2	1	..	1	7	..	7	
Divorced	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	
Unknown	6	..	6	1	..	1	..	..	..	..	..	..	8	..	8	
Totals, Mosman Hall, Charters Towers	100	..	100	67	..	67	11	..	11	10	..	10	211	..	211	
Grand Totals, all Hospitals	716	631	1,347	207	189	396	389	384	773	116	116	232	2,376	1,832	4,208	

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE LXXX

LENGTH OF RESIDENCE IN THE HOSPITAL OF THE PATIENTS WHO WERE DISCHARGED OR WHO DIED DURING THE YEAR AND OF THOSE WHO REMAINED ON THE BOOKS OF THE HOSPITAL ON 30TH JUNE, 1961

	*Discharges						Deaths			Remaining		
	Recovered			Relieved and not Improved								
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
BRISBANE MENTAL HOSPITAL												
Under 1 month	4	4	8	56	26	82	18	9	27	41	37	78
1 month and under 3 months	15	48	63	102	100	202	12	21	33	59	66	125
3 months and under 6 months	25	31	56	69	76	145	10	11	21	51	77	128
6 months and under 9 months	8	9	17	28	29	57	4	12	16	42	63	105
9 months and under 12 months	3	7	10	8	21	29	3	6	9	57	89	146
1 year and under 2 years	5	12	17	18	23	41	3	3	6	125	105	230
2 years and under 3 years	1	2	3	8	9	17	3	4	7	83	57	140
3 years and under 5 years	..	1	1	6	11	17	1	5	6	139	79	218
5 years and under 7 years	..	1	1	4	5	9	1	1	2	97	59	156
7 years and under 10 years	..	..	..	5	4	9	4	2	6	149	57	206
10 years and under 12 years	1	..	1	3	1	4	..	..	..	71	39	110
12 years and under 15 years	..	..	..	1	5	6	1	..	1	77	56	133
15 years and under 20 years	..	..	..	3	..	3	1	2	3	101	66	167
20 years and over	..	..	..	8	7	15	4	8	12	163	77	240
Totals, Brisbane Mental Hospital	62	115	177	319	317	636	65	84	149	1,255	927	2,182
TOOWOOMBA MENTAL HOSPITAL												
Under 1 month	21	12	33	15	11	26	5	5	10	15	12	27
1 month and under 3 months	27	21	48	7	6	13	4	..	4	9	15	24
3 months and under 6 months	11	20	31	5	5	10	2	4	6	10	13	23
6 months and under 9 months	4	4	8	2	5	7	..	1	1	6	9	15
9 months and under 12 months	1	6	7	3	1	4	..	1	1	11	6	17
1 year and under 2 years	9	7	16	7	4	11	3	1	4	15	26	41
2 years and under 3 years	..	1	1	2	1	3	..	2	2	24	32	56
3 years and under 5 years	2	1	3	1	3	4	1	1	2	30	37	67
5 years and under 7 years	..	..	..	..	..	..	1	2	3	30	32	62
7 years and under 10 years	..	1	1	..	3	3	1	..	1	50	38	88
10 years and under 12 years	..	..	..	4	3	7	..	..	..	28	25	53
12 years and under 15 years	..	..	..	2	1	3	..	1	1	44	44	88
15 years and under 20 years	..	1	1	..	2	2	2	1	3	62	68	130
20 years and over	..	..	..	8	18	26	10	7	17	233	216	449
Totals, Toowoomba Mental Hospital	75	74	149	56	63	119	29	26	55	567	573	1,140
IPSWICH MENTAL HOSPITAL												
Under 1 month	..	..	..	1	..	1	..	1	1	9	..	9
1 month and under 3 months	..	..	..	..	1	1	1	..	1	3	3	6
3 months and under 6 months	1	..	1	..	1	1	..	2	2	5	77	82
6 months and under 9 months	1	..	1	..	1	1	..	..	..	9	23	32
9 months and under 12 months	..	..	..	..	..	..	..	..	..	4	63	67
1 year and under 2 years	1	..	1	1	1	2	..	..	..	26	3	29
2 years and under 3 years	..	..	..	..	..	..	2	1	3	16	11	27
3 years and under 5 years	..	..	..	1	..	1	1	..	1	21	14	35
5 years and under 7 years	..	..	..	..	..	..	2	..	2	23	12	35
7 years and under 10 years	..	..	..	..	..	..	2	1	3	52	24	74
10 years and under 12 years	..	..	..	..	..	..	..	1	1	13	8	21
12 years and under 15 years	..	..	..	..	..	..	..	..	..	22	16	38
15 years and under 20 years	..	..	..	..	..	..	1	..	1	54	38	92
20 years and over	..	..	..	..	..	..	3	..	3	88	40	128
Totals, Ipswich Mental Hospital	3	..	3	3	4	7	12	6	18	343	322	675
MOSMAN HALL												
Under 1 month	2	..	2	5	..	5	1	..	1	7	..	7
1 month and under 3 months	14	..	14	1	..	1	..	..	..	12	..	12
3 months and under 6 months	24	..	24	2	..	2	2	..	2	17	..	17
6 months and under 9 months	18	..	18	..	..	..	1	..	1	7	..	7
9 months and under 12 months	4	..	4	..	..	..	1	..	1	11	..	11
1 year and under 2 years	3	..	3	1	..	1	1	..	1	21	..	21
2 years and under 3 years	1	..	1	1	..	1	1	..	1	14	..	14
3 years and under 5 years	..	..	..	1	..	1	1	..	1	26	..	26
5 years and under 7 years	1	..	1	..	..	..	2	..	2	33	..	33
7 years and under 10 years	..	..	..	..	..	..	..	..	..	18	..	18
10 years and under 12 years	..	..	..	..	..	..	..	..	..	10	..	10
12 years and under 15 years	..	..	..	..	..	..	..	..	..	12	..	12
15 years and under 20 years	..	..	..	..	..	..	..	..	..	9	..	9
20 years and over	..	..	..	..	..	..	..	..	..	14	..	14
Totals, Mosman Hall, Charters Towers	67	..	67	11	..	11	10	..	10	211	..	211
Grand Totals, all Hospitals	207	189	396	389	384	773	116	116	232	2,376	1,832	4,208

* For the purposes of this Table patients discharged under Section 49 (3) and voluntarily left have been classified under headings shown.

TABLE LXXXI
SHOWING ADMISSIONS, DISCHARGES, AND DEATHS AT THE WACOL REPATRIATION PAVILION DURING THE YEAR ENDED 30TH JUNE, 1961

Total number of patients on books as at 30th June, 1960	103	Total number of patients on books as at 30th June, 1961	109
Transferred from Brisbane Mental Hospital ..	21	Total number of patients on leave as at 30th June, 1961	10
Transferred from Toowoomba Mental Hospital..	3		
Admitted	3		
	130	Total number of patients in residence as at 30th June, 1961	99
Discharged, recovered	2	Average number of patients daily resident ..	95·7
Discharged, relieved	9		
Discharged, not improved	..		
Voluntarily left	3		
Died on leave	..		
Transferred to Brisbane Mental Hospital ..	7		
Transferred to Toowoomba Mental Hospital ..	..		
Discharged (Section 50 (8), 49 (3)), Mental Hygiene Act	..		
	21		

TABLE LXXXII
EXPENDITURE TABLE FOR THE FINANCIAL YEAR ENDED 30TH JUNE, 1961

	Brisbane Mental Hospital	Toowoomba Mental Hospital	Ipswich Mental Hospital	Mosman Hall, Charters Towers	Total and Average Costs
Average Number Daily Resident	1,968	1,061	607	196	3,832
	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
Total Expenditure	1,220,802 9 9	517,174 3 5	426,771 19 3	146,754 14 8	2,311,503 7 1
Sales	6,278 7 1	780 8 5	1,843 9 5	8 10 0	8,910 14 11
Collections	77,110 4 4	3,705 19 11	1,570 3 5	1,078 18 5	83,465 6 1
Net Expenditure	1,137,413 18 4	512,687 15 1	423,358 6 5	145,667 6 3	2,219,127 6 1
					Average Costs
Gross Cost per Patient per annum	620 6 6	487 8 10	703 1 8	748 15 0	603 4 2
Net Cost per Patient per annum	577 19 1	483 4 3	697 9 2	743 4 0	579 2 1
Gross Cost per Patient per week	11 17 11	9 7 0	13 9 8	14 7 2	11 11 4
Net Cost per Patient per week	11 1 8	9 5 4	13 7 6	14 5 1	11 2 1

TABLE LXXXIII
STATEMENT SHOWING EXPENDITURE BY THE DEPARTMENT OF PUBLIC WORKS AT MENTAL HOSPITALS AND THE EPILEPTIC HOME DURING THE FINANCIAL YEAR 1960-61

Place	Expenditure 1960-61					
	Revenue Fund			Loan Fund		
	£	s.	d.	£	s.	d.
Mental Hospitals—						
Brisbane (Excluding Expenditure at the Repatriation Hospital) ..	24,210	3	0	92,525	12	5
Charters Towers	949	13	8	19,660	5	4
Ipswich	7,330	3	10	129,066	19	8
Toowoomba	7,440	15	11	74,027	12	5
Epileptic Home—						
Toowoomba	708	3	7	107	8	7
	£40,639	0	0	£315,387	18	5
						£356,026 18 5

DETAILS OF EXPENDITURE ON MAJOR WORKS MENTAL HOSPITALS

	Expenditure 1960-61
	£ s. d.
Brisbane	Erection of new General Store
	Erection of three Residences for Clergy
	Exterior—Painting and Repairs—Various Male Wards
	Repairs, Repainting, &c.—Nurses' Quarters
	Fitters and Mechanical Workshops
	General Repairs Exterior and Interior Painting various Buildings
	Installation of Pumping Plant
	Fencing to Chaplains' Residences
Ipswich	Alterations and Additions to Male Ward
	Additions and Alterations to Main Kitchen
	Erection of new Ward for Females
	Road Works
	Additions to Nurses' Quarters
	Repairs, Renovations, Repainting—Official Residences
	Improvements to Water Supply
Charters Towers	Erection of Convalescent Ward
Toowoomba	Erection of T.B. Ward
	Improvements to Sculleries, Bathrooms and Lavatory Accommodation
	Installation of Boiler

TABLE LXXXIV
PSYCHIATRIC CLINIC
1. SUMMARY OF NEW PATIENTS REGISTERED DURING THE YEAR 1960-1961

	Under 18		18-19		20-29		30-39		40-49		50-59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 <i>Schizophrenic disorders—</i>																	
300·0 Simple type	1	..	..	..	2	..	2	2	2	2	..	1	1	..	8	5	13
300·1 Hebephrenic type	1	..	..	2	3	3	..	8	1	6	..	6	..	3	5	28	33
300·2 Catatonic type	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
300·3 Paranoid Type	..	..	..	..	6	2	15	4	9	6	3	6	1	1	34	19	53
300·4 Acute schizophrenic reaction ..	..	1	4	..	..	..	2	2	..	1	..	..	..	..	6	4	10
300·5 Latent schizophrenia	..	..	..	..	3	..	3	1	..	..	..	..	1	..	7	1	8
300·6 Schizo-affective psychosis ..	..	..	..	..	1	..	1	..	1	..	..	..	..	..	3	..	3
300·7 Other and unspecified	..	..	..	..	2	..	1	1	2	1	1	1	1	..	7	3	10
301 <i>Manic-depressive reaction—</i>																	
301·0 Manic and circular	..	..	..	..	..	..	..	3	..	1	1	1	1	..	2	5	7
301·1 Depressive	..	..	..	..	..	1	1	2	1	6	1	2	2	7	5	18	23
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	1	..	2	1	2	1	5	6
303 Paranoia and paranoid states ..	..	..	..	..	1	..	..	1	..	3	..	3	..	3	1	10	11
304 Senile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	3	9	3	9	12
305 Presenile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
306 Psychosis with cerebral arteriosclerosis ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
307 Alcoholic psychosis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
308 <i>Psychosis of other demonstrable etiology—</i>																	
308·1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
309 Other and unspecified psychoses ..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
310 Anxiety reaction without mention of somatic symptoms	..	2	..	1	..	5	5	19	8	9	1	4	1	1	15	41	56
311 Hysterical reaction without mention of anxiety reaction	..	..	..	..	..	1	1	3	..	9	..	2	..	..	1	15	16
312 Phobic reaction	..	..	..	..	..	2	1	..	1	..	..	..	..	..	2	2	4
313 Obsessive-compulsive reaction	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	2
314 Neurotic-depressive reaction	..	1	..	..	1	4	2	11	5	12	3	9	1	1	12	38	50
315 <i>Psychoneurosis with somatic symptoms affecting circulatory system—</i>																	
315·1 Other heart manifestations specified as of psychogenic origin ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
316 <i>Psychoneurosis with somatic symptoms affecting digestive system—</i>																	
316·2 Gastric neuroses	..	1	..	..	..	..	..	1	1	..	..	..	..	..	1	2	3
317 <i>Psychoneurosis with somatic symptoms affecting other systems—</i>																	
317·0 Psychogenic reactions affecting respiratory system	..	..	..	..	..	..	1	..	..	1	..	..	..	..	1	1	2
317·3 Cutaneous neurosis	..	..	..	..	..	..	..	..	..	..	..	1	1	..	1	1	2
317·4 Psychogenic reactions affecting musculoskeletal system	..	..	..	..	..	..	..	2	1	..	..	..	..	..	1	2	3
317·5 Psychogenic reactions affecting other systems	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	2	2
318 <i>Psychoneurotic disorders, other, mixed and unspecified—</i>																	
318·0 Hypochondrical reaction	..	..	..	..	..	..	..	..	..	1	1	1	..	1	1	3	4
318·3 Asthenic reaction	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	2	2
318·4 Mixed	..	..	..	1	..	3	1	..	1	2	1	..	1	..	4	6	10
318·5 Other and unspecified types ..	..	..	..	..	1	..	..	1	..	1	..	..	..	..	1	2	3
320 <i>Pathological personality—</i>																	
320·0 Schizoid personality	1	..	4	..	7	1	3	..	2	..	..	1	..	..	17	2	19
320·1 Paranoid personality	..	..	..	..	..	..	1	1	2	..	..	1	..	..	3	2	5
320·2 Cyclothymic personality	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
320·3 Inadequate personality	..	1	..	..	2	1	..	..	2	..	..	..	..	..	4	2	6
320·4 Antisocial personality	1	..	..	..	2	..	..	1	..	..	..	..	..	..	3	1	4
320·5 Asocial personality	..	1	..	..	2	..	..	..	..	..	..	..	..	..	2	1	3
320·6 Sexual deviation	..	..	3	..	4	..	2	..	..	..	1	..	..	..	10	..	10
320·7 Other and unspecified	..	..	1	1	1	..	1	1	1	..	..	..	..	..	4	2	6
321 <i>Immature personality—</i>																	
321·0 Emotional instability	..	..	1	..	..	..	..	1	..	..	..	..	..	..	1	1	2
321·1 Passive dependency	..	1	..	1	..	4	..	..	..	..	..	..	..	..	..	6	6
321·2 Agressiveness	1	..	..	1	4	2	3	..	..	..	..	..	..	..	8	3	11
321·5 Other and unspecified	1	1	2	1	2	3	4	2	..	5	2	..	..	..	11	12	23
322 <i>Alcoholism—</i>																	
322·1 Chronic	..	..	..	..	..	..	1	2	5	2	2	1	..	1	8	6	14
322·2 Unspecified	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
323 Other drug addiction	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2	2
324 Primary childhood behaviour disorders	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
325 <i>Mental deficiency—</i>																	
325·1 Imbecility	..	..	..	..	1	2	..	..	1	1	1	..	..	..	3	3	6
325·2 Moron	..	..	..	..	..	1	1	..	..	2	..	..	..	..	1	3	4
325·3 Borderline intelligence	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	2	2
325·5 Other and unspecified types ..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
326 <i>Other and unspecified character, behaviour and intelligence disorders—</i>																	
326·3 Acute situational maladjustment ..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
326·4 Other and unspecified	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	2
353 <i>Epilepsy—</i>																	
353·0 Petit mal	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
353·1 Grand mal	..	..	..	..	..	2	..	..	..	1	..	..	..	..	..	3	3
794 Early senile degeneration (without psychosis)	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
Stammer	..	1	1	1	1	..	3	1	..	1	..	..	..	..	5	4	9
Dyslalia	..	..	2	..	1	..	..	..	..	..	..	..	..	..	3	..	3
Aphasia	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
Cleft palate	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
No psychiatric abnormality	..	1	..	1	2	1	1	2	3	..	..	1	..	..	6	6	12
Not yet diagnosed	1	..	1	..	..	..	2	..	2	2	..	1	1	..	7	3	10
Total	9	12	20	11	52	40	59	79	52	79	18	46	17	32	227	299	526

TABLE LXXXV
PSYCHIATRIC CLINIC

2. SUMMARY OF PATIENTS CONTINUING IN TREATMENT FROM THE PREVIOUS YEAR, 1959-1960, INTO THE CURRENT YEAR, 1960-1961

	Under 18		18-19		20-29		30-39		40-49		50-59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 <i>Schizophrenic disorders—</i>																	
300-0 Simple type	..	..	2	1	3	1	3	1	..	1	1	1	..	..	9	5	14
300-1 Hebephrenic type	..	..	1	..	2	3	3	5	2	6	4	15	..	8	12	37	49
300-2 Catatonic type	..	..	..	..	2	1	2	1	1	..	..	..	..	..	5	2	7
300-3 Paranoid type	..	..	..	..	1	4	10	7	6	9	4	4	4	1	25	25	50
300-4 Acute schizophrenic reaction	..	..	..	..	1	..	1	4	..	3	1	1	..	..	3	8	11
300-5 Latent schizophrenia	..	..	..	..	..	3	1	4	2	3	1	..	..	..	4	10	14
300-6 Schizo-affective psychosis	..	..	..	..	..	2	1	..	1	1	1	1	..	2	3	6	9
300-7 Other and unspecified	..	..	..	..	4	3	2	4	2	2	..	6	..	..	8	15	23
301 <i>Manic-depressive reaction—</i>																	
301-0 Manic and circular	..	..	..	..	..	..	1	..	..	1	3	3	2	..	6	4	10
301-1 Depressive	..	..	..	..	..	1	1	4	1	1	1	7	2	7	5	20	25
301-2 Other	..	..	..	..	..	..	..	..	..	..	..	2	1	..	1	2	3
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	3	1	..	..	..	1	6	7
303 Paranoia and paranoid states	..	..	..	..	..	..	..	..	1	1	..	..	1	1	2	2	4
304 Senile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	1	9	1	9	10
305 Presenile psychosis	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	1
306 Psychosis with cerebral arteriosclerosis	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
308 <i>Psychosis of other demonstrable etiology—</i>																	
308-1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	..	1	1	1	..	..	..	..	..	..	1	2	3
308-2 Other	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
310 Anxiety reaction without mention of somatic symptoms	..	..	..	1	..	2	1	1	..	..	..	2	..	3	1	9	10
311 Hysterical reaction without mention of anxiety reaction	1	..	..	..	..	1	1	2	..	7	..	1	..	2	2	13	15
313 Obsessive-compulsive reaction	..	..	..	..	1	..	1	1	..	1	1	..	..	..	3	2	4
314 Neurotic-depressive reaction	..	..	..	..	1	..	..	4	3	11	2	6	2	6	8	27	35
315 <i>Psychoneurosis with somatic symptoms affecting circulatory system—</i>																	
315-1 Other heart manifestations specified as of psychogenic origin	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
316 <i>Psychoneurosis with somatic symptoms affecting digestive system—</i>																	
316-3 Digestive manifestations specified as of psychogenic origin	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
317 <i>Psychoneurosis with somatic symptoms affecting other systems—</i>																	
317-1 Psychogenic reactions affecting genito-urinary system	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
317-5 Psychogenic reactions affecting other systems	..	..	..	..	..	..	..	3	1	2	..	2	..	1	1	8	9
318 <i>Psychoneurotic disorders, other, mixed and unspecified—</i>																	
318-0 Hypochondriacal reaction	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
318-3 Asthenic reaction	..	..	..	..	..	..	..	..	1	..	..	..	..	1	1	1	2
318-4 Mixed	..	..	1	2	..	..	3	..	1	4	..	..	..	..	5	6	11
318-5 Other and unspecified types	..	..	..	..	..	..	..	1	1	..	..	..	..	..	1	1	2
320 <i>Pathological personality—</i>																	
320-0 Schizoid personality	1	..	..	..	5	..	4	..	..	..	..	..	..	..	10	..	10
320-1 Paranoid personality	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
320-3 Inadequate personality	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	2	2
320-4 Antisocial personality	1	..	..	1	..	..	..	..	..	..	..	..	..	..	1	1	2
320-5 Asocial personality	1	1	..	..	..	..	1	..	..	..	..	..	..	..	2	1	3
320-6 Sexual deviation	1	..	1	..	3	..	1	..	..	..	..	..	2	..	8	..	8
320-7 Other and unspecified	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	1
321 <i>Immature personality—</i>																	
321-0 Emotional instability	1	1	..	..	1	..	..	2	..	..	..	..	..	..	2	3	5
321-1 Passive dependency	..	..	..	..	1	..	..	3	..	2	..	..	..	..	1	5	6
321-2 Agressiveness	1	..	..	..	..	..	1	..	..	..	..	..	..	..	2	..	2
321-3 Enueris characterizing immature personality	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
321-4 Other symptomatic habits except speech impediments	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
321-5 Other and unspecified	..	..	..	..	1	3	..	2	..	..	..	..	..	..	1	5	6
322 <i>Alcoholism—</i>																	
322-1 Chronic	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
324 Primary childhood behaviour disorders	9	2	..	..	..	..	..	..	..	..	..	..	..	..	9	2	11
325 <i>Mental deficiency—</i>																	
325-1 Imbecility	..	..	..	..	2	1	1	1	..	1	..	..	..	..	3	3	6
325-4 Mongolism	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
325-5 Other and unspecified types	..	..	..	..	1	1	..	..	1	1	..	..	1	..	3	2	5
351 Cerebral Spastic infantile paralysis	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
353 <i>Epilepsy—</i>																	
353-0 Petit mal	..	..	..	1	1	..	..	1	..	..	..	..	..	..	1	2	3
353-1 Grand mal	..	..	..	..	1	..	2	1	..	3	..	..	..	..	3	4	7
353-3 Other and unspecified Psycho-motor	..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Other	..	..	1	..	1	..	..	..	..	..	..	..	..	..	1	..	1
355 Huntington's Chorea	..	..	..	..	..	..	..	..	..	..	1	2	..	1	1	3	4
Stammer	..	..	..	..	5	..	1	..	..	..	1	..	..	..	7	..	7
Dyslalia	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
Aphasia	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
Dysarthria	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	..	1
Laryngectomy	..	..	..	..	..	..	..	..	..	..	..	..	2	..	2	..	2
Deafness	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
Total	17	4	6	7	39	30	46	56	26	65	22	54	19	45	175	262	437

TABLE LXXXVI
PSYCHIATRIC CLINIC

3. SUMMARY OF PATIENTS DISCHARGED IN PREVIOUS YEARS WHO HAVE RECEIVED TREATMENT IN THE CURRENT YEAR, 1960-1961

	Under 18		18-19		20-29		30-39		40-49		50-59		60 and Over		Total		Total
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
300 <i>Schizophrenic disorders—</i>																	
300·0 Simple type	..	..	..	..	3	3	2	2	1	1	..	..	..	..	6	6	12
300·1 Hebephrenic type	..	..	..	..	2	3	1	3	..	2	..	1	1	1	4	10	14
300·2 Catatonic type	..	..	..	..	..	2	1	1	..	..	..	..	..	..	1	3	4
300·3 Paranoid type	..	..	..	..	3	..	3	2	5	6	2	7	..	1	13	16	29
300·4 Acute schizophrenic reaction ..	..	..	..	..	1	1	..	2	..	1	..	..	..	..	1	4	5
300·5 Latent schizophrenia	..	..	..	..	2	..	..	1	..	..	..	..	..	..	2	1	3
300·6 Schizo-affective psychosis ..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
300·7 Other and unspecified	..	..	..	..	1	..	..	4	1	..	..	..	..	..	2	4	6
301 <i>Manic-depressive reaction—</i>																	
301·0 Manic and circular	..	..	..	..	..	..	2	1	..	3	..	1	..	1	2	6	8
301·1 Depressive	..	..	..	..	..	..	..	..	2	2	..	2	..	2	2	6	8
302 Involutional melancholia	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
303 Paranoia and paranoid states ..	..	..	..	..	..	..	..	..	..	1	..	..	1	..	1	1	2
305 Presenile psychosis	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
307 Alcoholic psychosis	..	..	..	..	..	..	..	..	..	..	1	..	..	1	1	1	2
308 <i>Psychosis of other demonstrable etiology—</i>																	
308·1 Resulting from epilepsy and other convulsive disorders	..	..	..	..	..	1	..	1	..	..	..	4	..	..	..	6	6
308·2 Other	..	..	1	..	..	..	..	..	..	..	..	1	..	..	1	1	2
310 Anxiety reaction without mention of somatic symptoms	..	..	..	1	..	2	3	7	1	3	..	1	1	1	5	15	20
311 Hysterical reaction without mention of anxiety reaction	..	..	..	..	..	3	..	2	..	2	1	1	..	..	1	8	9
312 Phobic reaction	..	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	2
313 Obsessive-compulsive reaction ..	..	..	..	..	..	..	..	1	..	1	..	1	..	..	..	3	3
314 Neurotic-depressive reaction ..	..	..	..	..	..	..	1	3	1	5	..	..	2	1	4	9	13
315 <i>Psychoneurosis with somatic symptoms affecting circulatory system—</i>																	
315·2 Other circulatory manifestations of psychogenic origin	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
316 <i>Psychoneurosis with somatic symptoms affecting digestive system—</i>																	
316·2 Gastric neuroses	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1	1
316·3 Other digestive manifestations specified as of psychogenic origin ..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	1
317 <i>Psychoneurosis with somatic symptoms affecting other systems—</i>																	
317·5 Psychogenic reactions affecting other systems	..	..	..	..	..	..	..	1	..	1	1	..	..	..	1	2	3
318 <i>Psychoneurotic disorders, other, mixed and unspecified—</i>																	
318·0 Hypochondrical reaction	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1	..	1
318·4 Mixed	..	..	..	..	..	..	..	..	1	2	..	..	..	..	1	2	3
320 <i>Pathological personality—</i>																	
320·0 Schizoid personality	..	..	1	..	2	1	..	..	..	..	..	..	..	..	3	1	4
320·1 Paranoid personality	..	..	..	..	..	..	..	..	1	..	1	..	..	..	2	..	2
320·3 Inadequate personality	..	..	..	..	1	..	..	..	..	..	1	..	..	..	1	1	2
320·4 Antisocial personality	..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	2
320·5 Asocial personality	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
320·6 Sexual deviation	..	..	1	..	1	..	..	..	..	..	1	..	..	..	3	..	3
321 <i>Immature personality—</i>																	
321·0 Emotional instability	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
321·1 Passive dependency	..	1	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1
321·5 Other and unspecified	..	..	..	..	2	1	..	..	..	..	..	..	..	..	2	1	3
322 <i>Alcoholism—</i>																	
322·1 Chronic	..	..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1
325 <i>Mental deficiency—</i>																	
325·1 Imbecility	..	..	2	..	1	..	2	..	..	..	..	1	..	..	5	1	6
325·2 Moron	..	..	..	..	1	..	..	..	1	1	..	..	..	..	2	1	3
325·3 Borderline intelligence	..	..	1	..	1	..	..	..	..	..	..	..	..	..	2	..	2
325·5 Other and unspecified types ..	1	..	1	..	1	..	..	..	..	..	..	..	..	..	3	..	3
343 Post encephalectic behaviour disorder ..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
351 Spastic	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	1
353 <i>Epilepsy—</i>																	
353·0 Petit mal	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1	1
353·3 Other and unspecified—																	
Post traumatic	..	..	..	..	..	1	1	..	..	..	..	..	..	..	1	1	2
Other	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	1
Stammer	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
No psychiatric abnormality	..	1	..	..	1	..	..	..	..	..	..	..	..	..	1	1	2
Total	2	4	7	1	27	19	17	31	14	34	9	22	5	12	81	123	204

Total number of all patients who have received treatment during the year 1959-1960—

Table LXXXIV	..	..	..	526
Table LXXXVI	..	..	..	437
Table LXXXVII	..	..	..	204
Grand Total	..	..	..	1,167
Number of consultations, excluding speech therapy				
				5,100
Number of speech therapy consultations				
				1,885
Total	..	..	..	6,985

TABLE LXXXVII

SOURCES OF REFERRAL OF PATIENTS TO PSYCHIATRIC CLINIC, YEAR ENDED 30TH JUNE, 1961

	Male	Female	Totals
Personal	57	81	138
Commonwealth Government Departments	8	1	9
State Government Departments—			
(a) Justice Department	24	2	26
(b) Others	17	47	64
Medical Practitioners	25	37	62
General and Mental Hospitals	73	121	194
Others	22	11	33
Totals	226	300	526

TABLE LXXXVIII
PSYCHIATRIC CLINIC

4. FORENSIC CLINIC—ANALYSIS OF EXAMINATIONS OF PATIENTS (ALREADY INCLUDED IN PREVIOUS TABLES) REFERRED BY OR THROUGH THE DEPARTMENT OF JUSTICE

				Under 18		18-19		20-29		30-39		40-49		50-59		60 and Over		Total		Total
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
<i>Parole Board</i>																				
300	<i>Schizophrenic disorders—</i>																			
	300·0 Simple type			..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
320	<i>Pathological personality—</i>																			
	320·0 Schizoid personality			..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1
	320·6 Sexual deviation			..	..	..	..	..	..	1	..	..	..	..	..	1	..	2	..	2
321	<i>Immature personality—</i>																			
	321·2 Aggressiveness			..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
	321·5 Other and unspecified			..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
No psychiatric abnormality				..	..	..	..	1	..	..	..	2	..	..	..	..	..	3	..	3
Total				..	..	..	..	4	..	2	..	2	..	..	..	1	..	9	..	9
<i>Pre-Sentence Reports</i>																				
300	<i>Schizophrenic disorders—</i>																			
	300·3 Paranoid type			..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
308	<i>Psychosis of other demonstrable</i>																			
	<i>etiology—</i>																			
	308·2 Other			..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	1
320	<i>Pathological personality—</i>																			
	320·0 Schizoid personality			..	..	2	..	..	..	..	..	..	..	..	..	..	2	..	2	2
	320·4 Antisocial personality			..	..	..	..	1	..	..	..	..	..	..	..	..	1	..	1	1
	320·6 Sexual deviation			..	..	..	..	..	..	..	..	..	1	..	..	..	1	..	1	1
321	<i>Immature personality—</i>																			
	321·2 Aggressiveness			..	..	1	..	..	..	..	..	..	..	..	..	..	1	..	1	1
325	<i>Mental deficiency—</i>																			
	325·1 Imbecility			..	..	..	..	..	1	..	..	..	..	..	..	..	..	1	1	1
Total				3	..	1	..	1	1	1	..	..	..	1	..	..	7	1	8	8

TABLE LXXXVIII—continued
PSYCHIATRIC CLINIC—continued

				Under 18		18-19		20-29		30-39		40-49		50-59		60 and Over		Total		Total
				M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Police and Probation Officer Referrals																				
300 Schizophrenic disorders—																				
300·0 Simple type				..	..	1	..	2	..	..	..	..	..	..	..	..	..	3	..	3
300·1 Hebephrenic type				..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
318 Psychoneurotic disorders, other, mixed and unspecified—																				
318·4 Mixed				..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
320 Pathological personality—																				
320·0 Schizoid personality				..	..	3	..	..	..	..	..	..	..	..	..	..	..	3	..	3
320·2 Cyclothymic personality				..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
320·4 Antisocial personality				..	..	..	..	1	..	1	..	..	..	..	..	..	1	1	2	
320·6 Sexual deviation				..	..	2	..	1	..	1	..	..	..	..	..	1	..	5	..	5
321 Immature personality—																				
321·5 Other and unspecified				..	..	..	..	2	..	..	..	..	..	..	..	..	..	2	..	2
325 Mental deficiency—																				
325·1 Imbecility				..	..	..	..	..	1	..	..	..	..	1	..	..	..	1	1	2
Total				..	..	7	..	7	1	2	1	..	..	1	..	1	..	18	2	20
Prison Referrals																				
320 Pathological personality—																				
320·0 Schizoid personality				..	..	..	..	..	..	..	1	..	..	..	..	..	..	1	..	1
320·4 Antisocial personality				..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
320·5 Asocial personality				..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
320·7 Other and unspecified				..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
321 Immature personality—																				
321·2 Aggressiveness				..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
Total				..	2	..	..	1	..	1	..	1	..	..	..	..	..	5	..	5
Examined by Order of Executive Council																				
300 Schizophrenic disorders—																				
300·3 Paranoid type				..	..	..	..	..	..	..	1	..	..	1	..	..	..	1	..	1
300·5 Latent schizophrenia				..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	1
301 Manic-depressive reaction—																				
301·1 Depressive				..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1
320 Pathological personality—																				
320·6 Sexual deviation				..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
321 Immature personality—																				
321·5 Other and unspecified				..	..	..	..	1	..	..	..	..	..	..	..	..	..	1	..	1
325 Mental deficiency—																				
325·1 Imbecility				..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1
353 Epilepsy—																				
353·3 Psychomotor				..	..	1	..	..	..	..	..	..	..	..	..	..	..	1	..	1
Total				..	..	1	..	2	..	1	1	..	..	1	..	1	..	6	1	7
Grand Total				..	5	..	9	15	2	7	2	3	..	3	..	3	..	45	4	49

Number of Consultations at Her Majesty's Prison				..	..	..	..	..	39
Number of Consulatations at Psychiatric Clinic				..	..	..	..	..	137
Number of Consultations at Mental Hospitals				..	..	..	..	..	13
Total				..	..	..	..	..	189

DIVISION OF WELFARE AND GUIDANCE

Senior Medical Director: B. J. PHILLIPS, M.B., B.S. (Qld.), D.P.M. (London).
Medical Director: I. CHARLES, M.B., B.S. (Melb.), D.P.M. (Melb.).
Medical Director: B. NURCOMBE, M.B., B.S. (Qld.), D.P.M. (Melb.).

In its effort to extend its community service the Division of Welfare and Guidance helps hospitals and other departments which need its services. The clinics also supply psychiatric services to Church homes caring for children.

MARY STREET CHILD GUIDANCE CENTRE

The number of new cases seen during the year was 813 of which 560 were males and 253 were females. Of these, 50 were referred by the psychiatrists of the Children's Hospital for specialised psychological testing.

The age distribution of new patients is shown in the following Table XCI.

TABLE XCI
SHOWING AGES OF NEW PATIENTS ATTENDING CENTRE

Age Group	Number	Percentage
0- 4 years	97	12
5- 9	294	36
10-14 years	317	39
15 years and over	105	13

The percentage rate in the 0-4 years age group dropped from 20 per cent. last year to 12 per cent. The number of new patients in the 5-14 years age group is approximately 75 per cent. of the total.

Patients were referred to the Mary Street Child Guidance Centre from the various sources in approximately the same proportions as last year. Again the general practitioners and the parents themselves were responsible for most referrals. From this it may be inferred that most parents if they do not decide to take their child to a Child Guidance Clinic themselves will go to a general practitioner or some other doctor for help with their problem.

TABLE XCII
SHOWING MODES OF REFERRAL OF NEW PATIENTS

Mode	Number of Patients
Education Agencies—	
Schools	82
Health Agencies—	
Medical practitioners, hospitals, &c.	360
Welfare Agencies—	
State Children Department, Queensland Bush Children's Health Scheme, &c.	68
Private Individuals	282
Miscellaneous	21
Total	813

509 children had psychological tests in which their I.Q. was estimated. The distribution of intelligence among children attending the clinic is very much the same as last year as shown in Table XCIII.

TABLE XCIII
SHOWING DISTRIBUTION OF INTELLIGENCE IN 509 CHILDREN

I.Q.	Number of Children Tested at Welfare and Guidance	Number Tested Elsewhere	Total	Grouped Numbers	Wechsler Classifications
20- 30	1	0	1	71	Mental Defect
31- 40	3	0	3		
41- 50	14	2	16		
51- 60	20	2	22		
61- 70	22	7	29	78	Borderline Mental Defect
71- 80	65	13	78		
81- 90	92	15	107	107	Dull Normal
91-100	108	8	116	194	Average
101-110	72	6	78		
111-120	42	4	46	46	Bright Normal
121-130	8	2	10	10	Superior
131-140	2	0	2	3	Very Superior
141-150	1	0	1		
Totals	450	59	509	509	

Table XCIV. shows the number of special investigations carried out. This does not include tests done before the patient was referred.

TABLE XCIV
SHOWING SPECIAL INVESTIGATIONS PERFORMED DURING YEAR

Commonwealth Acoustic Laboratory—	
hearing tests	31
X-rays, Blood Tests, &c.	20
E.E.G's.	174

Of the 174 electro-encephalograph investigations carried out at the General Hospital, 104 were either abnormal or border-line. These investigations will be done at the Centre in future as an E.E.G. machine has now been provided.

A study of the racial origin of 769 patients showed that next to Australian born children the highest number attending was of Dutch origin. Holland has the reputation of being very "Child Guidance Minded" and this might be the explanation.

The schools which new patients attend are recorded in Table XCV. As would be expected most of the children attend State Schools. Some children had left school and 58 were unemployed.

TABLE XCV
SHOWING SCHOOLS ATTENDED BY CHILDREN ATTENDING THE CENTRE

Had not commenced school (too young)	126
School—State	350
School—Private	94
School—Other	—
(Correspondence, Opportunity, Disability, &c.)	125
Employed	49
Unemployed	58
Mentally defective—not at school or employed	11
	813

Some cases were sent along purely for psychological testing and not a great deal was known about their family. However, the following table will give some information about adopted and fostered children, broken homes and similar problems.

TABLE XCVI

SHOWING STATE OF CHILD'S PARENTS IN 760 CASES
(Based on where the child lived while attending clinic)

Natural Parents (lives with own mother and father)	577
Adopted Parents	49
Foster Parents	12
Institutions (lives in Church Home or similar institution)	37
Child with mother (father dead) ..	15
Child with father (mother dead) ..	3
Child with mother and step father ..	19
Child with father and step mother ..	12
Child with mother (father deserted, separated, divorced)	23
Child with father (mother deserted) ..	2
Child with relatives	11
	760

As there is considerable interest in working mothers this problem was investigated in 560 cases. Of this group 103 mothers worked full or part-time but 457 did home duties only. The mere fact the mother is working is not significant. It will not be shown from figures what effect her working would have on the family and whether she neglected her children emotionally by her working.

The reason for parents and others seeking help at a Child Guidance Clinic is of interest. Table XCVII. refers. This table apparently was interesting to child psychiatrists last year and was referred to during the year in one of the medical journals.

TABLE XCVII

SHOWING REASONS FOR REFERRAL OF PATIENTS TO CENTRE

Reason	Number	Per-centage
Reasons associated with Antisocial Behaviour (Absconding from Homes, Truanting, &c.)	117	14
Reasons associated with Education (Poor school work, refusal to go, &c.)	136	17
Reasons associated with Employment (Cannot keep a job, &c.)	22	3
Reasons associated with Behaviour Disorders (Disobedient, aggressive, hyperactive, &c.) ..	121	15
Reasons associated with Habits (Bed rocking, thumb sucking, &c.)	14	2
Reasons associated with Mental Deficiency ..	50	6
Reasons associated with Organic Brain Disorders	28	3
Reasons associated with Personality Disorders, Neurosis, or Psychosis	57	7
Reasons associated with Psychosomatic Symptoms and Sensory Defects (Allergies, Asthma, Headaches, Migraine, Loss of vision, hearing, &c.)	28	3
Reasons associated with Elimination (Enuresis, Encopresis, &c.)	30	4
Reasons associated with Sex Disorder ..	25	3
Reasons associated with Sleep	6	1
Reasons associated with Speech	119	15
Miscellaneous Reasons	60	7
Totals	813	100

That there are so many with anti-social behaviour as 14 per cent. is regrettable as it is from this group that juvenile delinquents will come. The group associated with educational problems consists of those cases whose emotional disturbances are associated with school.

The group described as Behaviour Disorders are different from the anti-social group in that they do not commit anti-social actions. Some of these patients prove later to have organic brain disorder. The group of cases listed under organic brain disorders includes only those in which the diagnosis is established from the first interview.

It will be noted that in Table XCVII. there are 119 cases referred to the Child Guidance Clinic because of some speech difficulty. These cases would have been seen by the doctors of the Welfare and Guidance Clinics while others go directly to the speech therapist having been referred by outside doctors. Some of the 119 cases would be treated by purely psychiatric means.

Speech therapists treated 152 children of whom 110 were males and 42 females. As will be seen in Table XCVIII. most are of school or pre-school age.

TABLE XCVIII

SHOWING AGES OF CHILDREN HAVING SPEECH THERAPY AT THE CENTRE

Age	Number
0- 4 years	43
5- 9	68
10-14 years	36
15 years and over	5
	152

Classification of the speech disabilities is given in Table XCIX. It will be seen that disorders of articulation and rhythm make up the majority of cases.

TABLE XCIX

SHOWING CLASSIFICATION OF SPEECH DISORDERS IN CHILDREN ATTENDING CENTRE

Reason	Number
Mutism	2
Delayed development of speech	13
Disorders of Articulation	65
Disorders of Rhythm	42
Disorders of Comprehension and Symbolization ..	1
Disorders of Articulation and Disorders of Rhythm ..	15
Disorders of Articulation and Disorders of Phonation	14
	152

Table C. shows modes of referral of patients with speech defects. As with the child guidance cases in general family doctors and others associated with health services and the parents themselves are the chief sources of referral. The general practitioner and the parent again are the two biggest individual sources of referral.

TABLE C

SHOWING MODES OF REFERRAL OF PATIENTS WITH SPEECH DISORDERS

Mode	Number
Education Agencies	9
Health Agencies	73
Welfare Agencies	13
Individuals	56
Miscellaneous	1
	152

As will be seen in Table CI. most patients came from the Greater Brisbane area.

TABLE CI

SHOWING AREAS FROM WHICH CHILDREN IN 783 CASES CAME TO THE CENTRE

Area	Number
Brisbane and Suburbs	603
Children's institutions in or near Brisbane	37
Areas outside Brisbane, i.e. country towns, &c. ..	143
	783

It was noted that some suburbs send very few cases and others send quite a large number. This is possibly due to the fact that there are more children in one particular suburb than there are in another. Other reasons for this are not clear, e.g. why Camp Hill sends 26 in a year and Hamilton or Graceville only 1.

As would be expected the nearer the town is to Brisbane the greater the number of patients referred. Twelve were referred from Ipswich, 7 from Toowoomba and 1 from Townsville.

It is a criticism often levelled at Child Guidance Clinics that a great deal of trouble is taken in working out the diagnosis and doing psychological tests but very little is done after that. In many cases of course, it is not desirable or necessary that patients should attend for many sessions. The high incidence of organic and mentally deficient cases at our particular clinic also reduces the number of cases for psychotherapy. Again many cases are beyond the help of psychotherapy and others more easily helped by drug treatment. Some patients receive quite lengthy treatment by psychotherapy.

The staff of the Welfare and Guidance Centre worked very hard during the year and got through a considerable amount of work. The work done by the different professional persons is difficult to compare as different methods are used. Table CII. shows the amount of work done by the various professions in the Centre and also the number of people in each professional group.

TABLE CII

SHOWING NUMBER OF INTERVIEWS BY THE PROFESSIONAL STAFF

Psychiatrists (2 full-time therapists and 4 part-time)—	
Total interviews	5,185
Total number of group play treatments ..	210
Psychologists (4 full-time psychologists)—	
Total interviews	1,590
Total number of group play treatments ..	1,430
Social Workers (4 full-time social workers)—	
Total interviews	2,160
Medical Consultants (3 part-time physicians)—	
Total interviews	225
Speech Therapists (One full-time and three part-time)—	
Total interviews (individual and group together)	1,520

Psychiatrists have been seeing cases and helping at clinics at the Children's Hospital, Chermside Hospital, Church Homes and Westbrook Farm Home for Boys. A certain amount of teaching has been done to various students as will be detailed later. Psychologists and social workers have also been doing some teaching and they have been helping with the special work associated with the babies in the Sub-Normal Babies Unit at Chermside Hospital.

WILSON YOUTH HOSPITAL

The Wilson Youth Hospital was not opened during the year 1960-1961. Some of the staff however was appointed and worked during the year at the Mary Street Child Guidance Centre. It was fortunate that they were available for this as the number of patients increased as indicated. As has been explained in the previous annual report the Wilson Hospital will have a Children's Court, a Court Clinic and State Children Department offices. There will be accommodation for about 36 boys and in-patient girls will be treated elsewhere.

The Mary Street Child Guidance Centre saw a number of delinquent children during the year for the Court and the State Children Department. These in future will be treated at Wilson Youth Hospital when the hospital is fully functioning. Psychiatric treatment will be available to all delinquent children who need it, and most delinquents will be under psychiatric supervision.

CHILDREN'S HOSPITAL—CHILD GUIDANCE CLINIC

The Children's Hospital Child Guidance Clinic has been functioning throughout the year and the visiting specialists are Dr. W. Leggat and Dr. I. Phillips. These medical officers work at the hospital outpatient department for two half days per week each. Dr. B. J. Phillips who is Senior Psychiatrist sees children in consultation in the hospital.

The Mary Street Centre admits cases to the Children's Hospital wards but as behaviour problems are a disturbing influence in a medical ward and facilities for psychiatric treatment are lacking, the psychiatrists rarely make use of this service.

The Children's Hospital Child Guidance Clinic makes use of the expert clinical psychologists at Mary Street.

THE SUB-NORMAL BABIES TREATMENT CENTRE

The Chermside Unit holds about ninety babies and small children. All sub-normal babies who are turned over to State care by their parents are sent first to this unit. It is hoped that they can be kept there, assessed and treated if possible, until they are old enough to go either to the Sub-Normal Association Schools or to the Farm Colony at Wacol. The unit is very well run and the devotion of the matron and her staff has succeeded in providing a very good environment for these babies. Every effort is made to get babies back into the community by the staff visiting Chermside from the Child Guidance Centre. Some have been discharged as can be seen in Table CIII.

TABLE CIII

SHOWING ADMISSIONS AND DISCHARGES FROM SUB-NORMAL BABIES' CENTRE

Number Patients Remaining in 30th June, 1960	74
Number Patients Admitted during Year	61
Number Patients Discharged during Year	24
Number Patients Died during Year	18
Number Patients Remaining in 30th June, 1961	93

During the year the intelligence of these children at Chermside has been carefully assessed. This is a painstaking and time-consuming job but should reveal some useful information, particularly about future rehabilitation needs.

It has been proposed to extend accommodation for sub-normal babies so that they can be kept at the Chermside Centre till approximately school age. At the new centre there will be not only more beds and improved facilities generally but also a kindergarten which can be used for part of the training of teachers of sub-normal children.

CHILD GUIDANCE SERVICE TO INSTITUTIONS FOR DELINQUENT CHILDREN

During the year the Division of Welfare and Guidance has been able to extend some service to the various institutions caring for delinquent children. Psychiatrists have been calling at intervals at the Salvation Army Industrial School for Girls, the Holy Cross Home at Wooloowin, and the Home of the Good Shepherd at Mitchelton. Visits to Westbrook Farm Home for Boys have also been made. This service has been of considerable help particularly in the girls' home in helping to settle down the emotionally disturbed children. Thirty-five boys were seen at Westbrook during the year.

TEACHING ACTIVITIES

As the Division of Welfare and Guidance specialises in the emotional or psychological disorders of children and adolescents, staff members have been asked to do a considerable amount of teaching. The various students attending the Centre are listed in Table CIV. Almost all members of the staff, particularly the senior ones have been active in teaching students. It will be noted that this year medical students attended for the first time.

TABLE CIV

SHOWING STUDENTS WHO RECEIVE TEACHING FROM THE CHILD GUIDANCE CENTRE

Medical Year IV. ..	School Health Nurses.
Medical Year V. ..	Teachers (Students)
Medical Year VI. ..	Kindergarten Remedial Education Sub-normal School.
Psychology IIIB. ..	
Social Work Students ..	Trainee Marriage Guidance Counsellors.

PUBLICATIONS DURING THE YEAR

"The Idiot Savant", by B. Nurcombe and N. Parker.
 "Reading Disabilities as a Cause of Emotional Disturbances in Children", by B. J. Phillips.

These two papers were read before the A.N.Z.A.A.S. Conference.

"Aggression in Children", by B. J. Phillips, published in Kindergarten Journal.

"The Organic Red-herring in the Treatment of Children with Behaviour Disorders", by C. Williams.

Read before British Psychological Society Annual Conference, 1960.

Besides formal teaching to students the professional staff has been active in public lecturing. Teaching the psychological care of children to the community in general is one important preventive measure. Various groups of people have received talks on child guidance topics from our staff members usually in their own time.

The teaching done by the Division of Welfare and Guidance is very important. No less important is the teaching of medical students as the public seems to expect the family doctor to help parents with children who have behaviour problems. The Child Guidance Centre is always ready to help doctors with these cases.

During the time since its formation, i.e. approximately eighteen months, the Division of Welfare and Guidance has seen the formation of three basic centres for the treatment of emotionally disturbed children. These are the Child Guidance Centre at Mary Street, the Wilson Youth Hospital for the treatment of delinquent children and the Sub-Normal Babies' Centre at Chermside Hospital. This has been good progress. However, there still remains a most pressing need and that is an in-patient centre for the treatment of emotionally disturbed children. The child who is aggressive and anti-social or who is uncontrollable and plays truant may easily develop into a delinquent. He is often beyond the control of his parents and out-patient treatment is usually ineffective. It is much better if he is treated in a Child Guidance Hospital as early as possible rather than wait till his delinquent patterns of behaviour are fixed and he has to face a charge in the Children's Court.

For these reasons the establishment of a Child Guidance Hospital is urgent and the Department is at present planning such a hospital at Chermside. It is expected to have forty beds for boys and forty beds for girls and to have all the necessary equipment. With these extra facilities Queensland youth will have a Child Guidance Service second to none.

ALCOHOL CLINIC

Medical Officer: E. J. O’SULLIVAN, M.B., Ch.M. (Syd.).

The ideal place for the treatment of alcoholics is a clinic consisting of wards of a general hospital. Under such a set-up a person who is drunk can be accommodated in other wards apart from the clinic and transferred after he has “dried out.”

If we accept alcoholism as just “another disease” it should be treated in a hospital where other diseases are treated.

This is the set-up in Queensland which is one of the few places in the world where provision is made for the admission of alcoholics to a separate unit in a general hospital. If alcoholics are treated in a setting with other illnesses many do not feel free to discuss their alcoholism.

Difficulty is still being experienced in obtaining a social worker to carry out the follow-up of the patients after leaving hospital.

Table CV. sets out the attendances at the Clinic.

TABLE CV
ATTENDANCES AT ALCOHOL CLINIC, BRISBANE HOSPITAL

—							Males	Females	Totals	—
New Patients—										
Outpatients' Department level	..	..	..	..	..	..	134	20	154	} Total Admissions 132
Direct Admissions ..	..	..	..	..	..	..	73	15	88	
Transfers from Ward 16	..	..	..	..	..	..	32	12	44	
Total new patients	..	..	..	..	..	..	239	47	286	
Patients previously treated—										
Outpatients' Department level	..	..	..	..	..	..	209	50	259	} Total Admissions 35
Direct Admissions ..	..	..	..	..	..	..	18	7	25	
Transfers from Ward 16	..	..	..	..	..	..	5	5	10	
Total patients previously treated	..	..	..	..	..	..	232	62	294	
Total Patients, 1st July, 1960 to 30th June, 1961—										
Outpatients' Department level	..	..	..	..	..	..	343	70	413	} Total Admissions 167
Direct Admissions ..	..	..	..	..	..	..	91	22	113	
Transfers from Ward 16	..	..	..	..	..	..	37	17	54	
Total patients ..	..	..	..	..	..	..	471	109	580	
Interviews—Non-alcoholic Relatives	..	..	..	..	..	..	57	98	155	

LABORATORY OF MICROBIOLOGY AND PATHOLOGY

Director: J. I. TONGE, M.B., B.S. (Syd.), D.C.P. (Syd.), M.C.P.A.

Deputy Director: M. J. J. O'REILLY, M.B., B.S. (Syd.), M.C.P.A.

Pathologist: A. DAVISON, M.B., B.S. (Qld.), M.C.P.A.

Technical Supervisor: H. E. BROWN to 31st December, 1960.

D. J. W. SMITH, M.Sc., from 1st January, 1961.

1. STAFF AND DEVELOPMENT.

2. STATISTICAL SUMMARY.

3. Q FEVER.

- (a) Incidence: geographic and occupational.
- (b) The Capillary agglutination test for *C. burneti*.
- (c) Chronicity of Q fever.
- (d) Survey of animal sera.

4. LEPTOSPIROSIS—

- (a) *Leptospira broomi*.
- (b) Incidence of leptospirosis.
- (c) Survey of Animal reservoirs in North Queensland.
- (d) Mixed infections in animals.
- (e) Cultures from human sources.
- (f) Serological survey from India.
- (g) Leptospirosis acquired from soil.

5. COMPLEMENT FIXING ANTIBODIES FOR THE PSITTACOSIS-LYMPHOGRANULOMA GROUP OF VIRUSES.

6. SEROLOGICAL DIAGNOSIS OF SYPHILIS.

7. BACTERIOLOGY.

- (a) Investigation of diarrhoea in Port Moresby.
- (b) Salmonella typing.
- (c) Naseptin trial.
- (d) Wound infection survey at Princess Alexandra Hospital.
- (e) Phage typing of staphylococci.
- (f) Tuberculosis laboratory.

8. HISTOPATHOLOGY.

9. INSTITUTE OF FORENSIC PATHOLOGY.

10. PUBLICATIONS.

1. STAFF AND DEVELOPMENT

The Institute of Forensic Pathology was completed in December, 1960, and the first autopsy was performed in the building on 21st December.

Plans have been finalised for the new laboratory which is to be housed in the Health and Welfare building to be erected in George Street. Tenders have been called and it is hoped that work will commence during 1961. It is also anticipated that the erection of the new Animal House at the Normanby will be commenced during the next financial year.

It has been necessary to increase the laboratory space for the Tuberculosis unit and plans have been drawn for this purpose. Additional large incubators have had to be purchased and other major items of equipment are on order.

Collaboration with the Queensland Institute of Medical Research has continued particularly in the serological surveys of native animals from the Field Station at Innisfail. The Institute staff have provided assistance to this laboratory in many ways during the year.

A survey of wound infection has been conducted at the Princess Alexandra Hospital with the help of a sister from the School Health Services, seconded for the purpose. The medical and nursing staff of the hospital have co-operated excellently in this survey.

In the capacity of W.H.O. Leptospiral Reference Laboratory for Australasia the culture collection has been maintained, cultures have been supplied to other laboratories and several serological surveys carried out. The largest survey has been for the Christian Medical College in Vellore, South India.

Two members of the staff participated in the scientific sessions of A.N.Z.A.A.S., held in Brisbane in May, 1961. The medical staff continue to act as part-time lecturers in Forensic Medicine and conduct lecture demonstrations for fifth year Medical students.

Over 260,000 tests have been performed during the year, an increase of 22,000 over the total for the previous year. This increase has been fairly evenly distributed over most sections. The histopathology section has been expanded owing to the Radium Institute having referred over 2,400 biopsies for diagnosis. The pressure on this section will be eased by the opening of the new laboratory at the Institute of Forensic Pathology, where all post-mortem tissues will be handled in future.

The Director attended a meeting in Canberra in November, 1960, called by the Commonwealth Health Department to discuss techniques in use for the laboratory diagnosis of tuberculosis. This provided a long needed opportunity to discuss mutual problems with laboratory workers in other States and to make an attempt to evaluate and standardise diagnostic techniques.

The Director has been appointed to a Committee of the National Health and Medical Research Council on Traffic injury research. A preliminary meeting was held in Canberra on June 26th, 1961.

STATISTICAL SUMMARY, 1960-1961

TABLE CVI

1. BACTERIOLOGY

A. Specimens of Human Origin (Non-Tuberculous)

Specimen	Examination			Totals
	Culture	Microscopy	Antibiotic Sensitivity	
Swabs—				
Throat and Nose	174	29	64	267
Urethra, Cervix, Anus, Bartholin's Glands	238	2,324	37	2,599
Ear	63	3	41	107
Eye	16	1	9	26
Other	22	1	14	37
Pus	353	23	305	681
Pleural Fluid	31	21	3	55
Cerebrospinal Fluid	57	91	..	148
Serous Exudate	..	992	..	992
Sputum	315	37	138	490
Blood	58	..	1	59
Urine	1,137	2,085	471	3,693
Faeces	508	95	6	609
Post Mortem Swabs and Tissues	39	2	..	41
Miscellaneous	11	7	..	18
Total	3,022	5,711	1,089	9,822
Total 1959-60	..	..	..	10,400

TABLE CVI—continued
B. Tuberculosis Section

Specimen	Examination			Totals
	Culture	Microscopy	Animal Inoculation	
Sputum	8,631	6,632	264	17,527
Gastric Aspirate	1,973	..	750	2,723
Laryngeal Swab	39	9	1	49
Urine	289	..	130	419
Pus	23	23	22	68
Pleural Fluid	48	48	46	142
Cerebrospinal Fluid	11	11	11	33
Ascitic Fluid	4	4	4	12
Bronchial Washing	28	28	5	61
Laryngeal and Tracheal Washing	57	57	8	122
Lung Tissue	55	55	16	126
Miscellaneous	8	8	9	25
Total	11,166	8,875	1,266	21,307
Culture	Identification (atypical strains)			113
	Sensitivity test (Streptomycin, P.A.S., I.N.A.H.)			227
	Sensitivity test (Viomycin, Pyrazinamide and Cycloserine)			142
	Total			21,789
	Total 1959-60			18,062

C. Foods and Waters

Specimen	Examination			Totals
	Culture	Plate Count	Reductase	
Water	441	432	..	873
Milk	638	638	482	1,758
Cream	59	59	45	163
Other Milk Products	27	17	..	44
Meats and Fish	107	6	(5 precipitation tests)	118
Coconut	158	..	..	158
Miscellaneous	55	22	..	77
Total				3,191
Total 1959-60				1,900

D. Various Materials

Specimen	Object of Examination				Totals
Disintectants and Antiseptics	Rideal Walker Co-efficient	..	..	..	84
Bottles	Germicidal Value	..	..	..	1
Glasses	Sterility	..	..	..	163
Catgut	Sterility	..	..	..	27
Other	Sterility	..	..	..	157
Miscellaneous	Sterility	..	..	..	7
Bacterial Cultures	Culture	..	..	..	14
Skin Scrapings	Identification	..	..	..	10
	Culture	..	..	..	6
	Microscopic	..	..	..	4
Total					473
Total 1959-60					295

2. PHAGE TYPING

	Number
Cultures Prepared	3,281
Coagulase Tests	1,808
Antibiotic Sensitivity Tests	553
Phage Typing of Staphylococci	1,403
Total 1960-61	7,045
Total 1959-60	17,260

TABLE CVI—continued

3. SEROLOGY

	Number
Serum Agglutination (Screen)—	
<i>Salmonella typhosa</i> (H)	4,411
<i>Salmonella paratyphi</i> (H)	4,412
<i>Salmonella schottmulleri</i> (H)	4,442
<i>Proteus OX19</i>	4,413
<i>Proteus OXK</i>	4,412
<i>Brucella abortus</i>	4,412
<i>Leptospira icterohaemorrhagiae</i>	5,838
<i>Leptospira canicola</i>	5,838
<i>Leptospira australis</i>	5,838
“ Robinson ” Strain of <i>leptospira</i>	5,838
<i>Leptospira zanoni</i>	5,838
<i>Leptospira esposito</i>	5,838
<i>Leptospira pomona</i>	5,838
<i>Leptospira grippotyphosa</i>	5,838
<i>Leptospira medanensis</i>	5,838
<i>Leptospira kremastos</i>	5,838
<i>Leptospira mini</i>	5,838
<i>Leptospira hyos</i>	5,838
<i>Leptospira celledoni</i>	5,838
<i>Leptospira autumnalis</i>	5,838
<i>Leptospira broomi</i>	1,208
<i>Leptospira sarmin</i>	287
<i>Leptospira javanica</i>	287
<i>Leptospira schuffneri</i>	287
<i>Leptospira benjamin</i>	287
<i>Leptospira jonsis</i>	287
<i>Leptospira sumneri</i>	287
<i>Leptospira malaya</i>	287
<i>Leptospira ballum</i>	287
<i>Leptospira pyrogenes</i>	287
<i>Leptospira cynopteri</i>	287
<i>Leptospira sentot</i>	287
<i>Leptospira bankinang</i>	287
<i>Leptospira djasiman</i>	287
<i>Leptospira wolffi</i>	287
<i>Leptospira hardjo</i>	287
<i>Leptospira bataviae</i>	287
<i>Leptospira semeranga</i>	287
<i>Leptospira andamana</i>	287
<i>Coxiella burneti</i>	36
<i>Streptococcus MG</i>	7
Cold Agglutinins	6
Serum Agglutination Tests (Quantitative)	1,955
Paul Bunnell Tests	506
Leptospiral Strains Typed (19) Agglutination Tests Performed in Typing	500
Leptospiral Antisera Prepared	6
Complement Fixation Tests—	
<i>Coxiella burneti</i> (Phase I)—	
Routine	83
Quantitative	33
<i>Coxiella burneti</i> (Phase II)—	
Routine	6,003
Quantitative	667
Typhus Fever Murine (Soluble)—	
Routine	25
Quantitative	8
Typhus Fever Murine (Washed Rickettsia)—	
Routine	2
Quantitative	2
Typhus Fever Epidemic (Washed Rickettsia)—	
Routine	2
Quantitative	2
Psittacosis (E.A.E. Virus)—	
Routine	6,001
Quantitative	296
Eagle Wassermann (Serum)—	
Routine	7,552
Quantitative	26
Kolmer Wassermann (Serum)—	
Routine	4,442
Quantitative	3
Reiter Protein	410
Eagle Wassermann (C.S.F.)	176
Kolmer Wassermann (C.S.F.)	90
Kline	7,290
Kahn	70
V.D.R.L.	1,539
Lange Colloidal Gold Reaction (C.S.F.)	959
Total 1960-61	153,275
Total 1959-60	144,847

TABLE CVI—continued

4. BIOCHEMISTRY

Specimen	Examined For—	Number
Whole Blood ..	Urea	902
	Glucose	186
	Uric Acid	462
	Chloride	10
	Pigments	15
Plasma	Protein	1
	Fibrinogen	2
Serum	Protein	1,214
	Cholesterol	349
	Bilirubin	740
	Chloride	76
	Calcium	107
	Inorganic Phosphate	52
	Acid Phosphatase	96
	Alkaline Phosphatase	656
	Thymol Turbidity	655
	Thymol Flocculation	655
	Zinc Sulphate Turbidity	655
	Paper Electrophoresis	817
	Amylase	17
	Cholinesterase	16
	Sodium	140
	Potassium	133
	Transaminase	49
	Fibrinogen	1
	CO ₂ combining power	1
Cerebrospinal Fluid ..	Protein	102
	Globulin	88
	Chloride	94
	Glucose	102
	Urea	19
	Sodium	1
	Potassium	1
Pleural Fluid ..	Protein	3
Ascitic Fluid	Protein	1
Urine	Albumin	2,086
	Sugar	2,091
	Pigments	8
	Bilirubin	10
	Urobilin	7
	Urobilinogen	8
	Diastase	8
	Urea	1
	Calcium	21
	Phenylpyruvic Acid	2
	Inorganic Phosphate	5
	Bence Jones Protein	1
	Coproporphyrins	39
	Acetone	2
	Aceto-acitic acid	1
	Chlorides	1
	Phenylketonuria	1
Faeces	Total, Split and Unsplit Fats	92
	Occult Blood	58
	Creatorrhoea	1
	Trypsin	4
Renal Calculi ..	Chemical Constitution	40
Functional Tests ..	Glucose Tolerance Tests	254
	Urea Clearance Tests	64
	Urea Concentration Tests	66
	Fractional Test Meals	66
	Histamine test meals	18
Total 1960-61		12,373
Total 1959-60		10,985

TABLE CVI—continued
5. HAEMATOLOGY.

—	Number
Cell Counts—	
Red Cells (Total)	277
Red Cells (Stippled)	113
Reticulocytes	49
White Cells (Total)	3,144
White Cells (Differential)	3,490
Platelet Count	83
Haemoglobin	10,794
Haematocrit	7,011
Sedimentation Rate	920
Coagulation Time	60
Bleeding Time	59
Prothrombin Time	312
Clot Retraction Time	1
Red Cell Fragility	9
Le Cells	28
Blood Grouping (A.B.O.)	3,892
Blood Grouping (Rh)	3,892
Blood Grouping (M and N)	11
Rh Antibodies	1,378
Total 1960–61	35,523
Total 1959–60	33,065

6. PARASITOLOGY

Specimen	Object of Examination	Number
Faeces	Amoebae (Cysts and Vegetative)	99
	Helminth ova	756
Pus	<i>Trichomonas vaginalis</i>	8
Blood	<i>Plasmodium</i> spp.	19
Helminth	Identification	10
	Total 1960–61	892
	Total 1959–60	784

7. VARIOUS TESTS

—	Number
Male Toad Test (Pregnancy)	2,107
“ Cat-Scratch ” Skin Test	1
Seminal Fluid Assessment	12
Virulence Tests for <i>Corynebacterium</i> Diphtheriae	1
Vaccines Prepared	1
Total 1960–61	2,122
Total 1959–60	2,378

8. HISTOLOGY

Tissue Sections Prepared	Number
Human—	
Biopsy (specimens received 6,583)	9,543
Post-Mortem	1,660
Medico-Legal Tissues	51
Animal Tissues	34
Total 1960–61	11,288
Total 1959–60	9,083

9. EXFOLIATIVE CYTOLOGY

Specimen	Number
Sputum	1,610
Bronchial or Tracheal Washing	108
Pleural Fluid	48
Miscellaneous	33
Total 1960–61	1,799
Total 1959–60	1,031

TABLE CVI—continued
10. MEDICO-LEGAL

Specimen	Object of Examination	Number
Clothing and Various Articles	Blood	192
	Spermatozoa	214
Vaginal Smears	Spermatozoa	113
Tissue	Histopathology	51
Blood	Grouping	7
Scrapings	Presence of Blood	11
	Determination of Blood Group of Stains	4
Skull	Identification	1
Hair	Identification	13
Earth	Presence of Blood	4
	Total 1960–61	610
	Total 1959–60	510

11. POST-MORTEM

—	Number
Post-Mortem Examinations—	
Total 1960–61	669
Total 1959–60	653

12. ATTENDANCES AT COURT

—	Number
Supreme Court	30
Police Court	36
Coroner’s Court	3
Other Courts	16
	85

13. MATERIAL SUPPLIED

<i>To hospitals, private practitioners and local authorities</i>			
Diagnostic kits for tuberculosis ..	..	1,407	
Diagnostic kits for bacteriology ..	..	1,432	
Diagnostic kits for haematology and serology ..	..	3,452	
Diagnostic kits for biochemistry ..	..	224	
Diagnostic kits for cytology ..	..	952	
Media (single units) ..	..	348	
Total 1960–61 ..		7,815	
Total 1959–60 ..		6,799	

3. Q FEVER

(a) Incidence: geographic and occupational

During the period 1st July, 1960, to 30th June, 1961, 269 cases of Q fever were diagnosed in Queensland in this laboratory. Indication of probable recent infection was regarded as either a complement fixation titre for *Coxiella burneti* of 1 : 64 or greater in a single serum or a significant rise in titre in paired sera. An additional 63 patients with pyrexias of unknown origin had serum titres of 1 : 32 or 1 : 16 in single samples or else had a rise in titre in paired sera of doubtful significance. Some of these were probably from patients with acute infections but the serological results were not conclusive owing to the availability of only one serum for test or paired sera not having been collected at the optimum period. Thirteen cases of Q fever were diagnosed from New South Wales from the small number of sera submitted from interstate. The geographical distribution of the cases is set out in Table CVII.

TABLE CVII
GEOGRAPHICAL DISTRIBUTION OF Q-FEVER CASES
DIAGNOSED IN THE LABORATORY
(1ST JULY, 1960—30TH JUNE, 1961)

QUEENSLAND				
Metropolitan District	..	..	..	83
Moreton District	..	..	..	41
Maryborough District	..	..	..	5
Downs District	..	..	..	30
Cairns District	..	..	..	19
Townsville District	..	..	..	6
Mackay District	..	..	..	5
Rockhampton District	..	..	..	10
Peninsula District	..	..	..	1
Far Western District	..	..	..	7
Central Western District	..	..	..	37
South Western District	..	..	..	10
Roma District	..	..	..	15
Total	..	..	..	269
NEW SOUTH WALES				
Northern Rivers District	..	..	..	6
Tenterfield District	..	..	..	4
Newcastle	..	..	..	1
Coffs Harbour	..	..	..	1
Broken Hill	..	..	..	1
Total	..	..	..	13

Further evidence of the wide distribution of this disease in New South Wales is provided this year. It is of interest that a further patient from Broken Hill, an abattoir worker, had a serum titre of 1 : 16.

The occurrence of Q fever at the Lockhart River Mission on Cape York Peninsula in September, 1960, extends still further the geographical spread of this disease in Queensland. The patient was an aboriginal who was mustering cattle and having contact also with wild pigs and bandicoots.

The occupational distribution of the Q fever patients is set out in Table CVIII. This year 43 per cent. of the patients were associated with the meat industry and 27 per cent. with the sheep industry. Whereas the number of cases from the sheep industry has remained steady over the past three years, there has been a decline in the number of meatworkers infected during the same period.

(b) The Capillary agglutination test for *C. burneti*

A preliminary trial of Luoto's capillary agglutination test has been made using an Australian antigen. Tests of a limited number of milk samples also kangaroo and human sera gave promising results. It is proposed to evaluate this test by running it in parallel with the complement fixation test as soon as adequate supplies of suitable capillary tubing can be obtained. This test should solve many of the difficulties which have arisen due to anticomplementary results in complement fixation tests with animal sera.

(c) The Chronicity of Q. fever

In collaboration with Dr. Powell of the Princess Alexandra Hospital a survey for evidence of chronic illness following an acute attack of Q fever has continued. To date a serological study of fifty-three patients, who had been clinically investigated during their acute attack at least twelve months previously, has been carried out. Both Phase I. and Phase II. antigens have been used in the complement fixation tests. Of the fifty-three sera tested, three have had Phase I. titres of 1 : 128, two of 1 : 64, three of 1 : 32, two of 1 : 16 and twelve of 1 : 8.

At present it is not possible to assess the significance of these titres with the Phase I. antigen but the serological findings are being correlated with the clinical evidence and valuable information is being accumulated regarding the value of this antigen as a diagnostic tool.

Both blood and urine have been inoculated into guinea pigs from fifteen patients suspected of having chronic Q fever but to date *C. burneti* has not been recovered in any instance. Lung tissue was inoculated into guinea pigs from one patient, the cause of whose death was obscure at autopsy, and samples of heart and spleen from another patient with endocarditis. In neither case was *C. burneti* recovered.

(d) Survey of Animal sera

Twenty-six dog sera and twenty-four horse sera have been examined for evidence of *C. burneti* but no significant titres were obtained.

TABLE CVIII
OCCUPATIONAL DISTRIBUTION OF Q-FEVER CASES
DIAGNOSED IN THE LABORATORY
(1ST JULY, 1960—30TH JUNE, 1961)

QUEENSLAND				
<i>Meat Industry—</i>				
Abattoir workers	..	..	..	101
Sundry occupations associated with abattoirs	..	..	..	10
Cattle station workers	..	..	..	8
Butchers	..	..	..	2
Veterinarian	..	..	..	1
Total	..	..	..	122
<i>Sheep Industry—</i>				
Shearers	..	..	..	45
Station hands	..	..	..	24
Graziers	..	..	..	7
Child on stations property	..	..	..	1
Agent	..	..	..	1
Total	..	..	..	78
<i>Dairying Industry—</i>				
Dairy farmers	..	..	..	22
Mixed farmers	..	..	..	1
Wife and Children on farms	..	..	..	6
Total	..	..	..	29
<i>Others—</i>				
Hide handlers	..	..	..	4
Kangaroo skinner	..	..	..	1
Labourers	..	..	..	2
Tradesmen	..	..	..	7
Cane farmer	..	..	..	1
Timber worker	..	..	..	1
Clerks	..	..	..	3
Jockey	..	..	..	1
Child (school age)	..	..	..	1
Unstated	..	..	..	19
Total	..	..	..	40
NEW SOUTH WALES				
Abattoir workers	..	..	..	7
Dairy farmers	..	..	..	2
Grazier	..	..	..	1
Child	..	..	..	1
Policeman	..	..	..	1
Unstated	..	..	..	1
Total	..	..	..	13

4. LEPTOSPIROSIS

(a) *Leptospira broomi*

The doubtful status of some of the Australian "canicola" strains has been referred to in earlier reports. These strains were conservatively regarded as constituting a subtype of *L. canicola*. However as a result of further studies both here and in other laboratories the heterologous relationship of these strains to other serotypes of the canicola serogroup, recorded from Malaya and Indonesia, has been satisfactorily established. The name *L. broomi* has been proposed for this serotype in honour of the late Dr. J. C. Broom of the Wellcome Institute of Medical Research. To date twelve strains of *L. broomi* of human origin and four strains from bandicoots and rodents have been recorded from North Queensland. A report of the identification of *L. broomi* was published during the year.

(d) Incidence of leptospirosis

All sera submitted from patients with pyrexias of unknown origin were tested with the agglutination test, using fourteen strains. During the period 1st July, 1960, to 30th June, 1961, sera from 276 patients in Queensland were found to have leptospiral antibodies in a titre of 1 : 100 or greater and of these the titres were indicative of a probable recent infection in 172. Of these, 63 per cent. were due to *L. pomona*. The distribution of the probable infecting serotypes is shown in Table CIX.

In a limited number of sera submitted from New South Wales, twenty were found to have titres of 1 : 100 or greater of leptospiral antibodies and in fourteen the titres were indicative of recent infection. All these cases were from the Northern Rivers area and thirteen of the infections were due to *L. pomona* and one to *L. hyos*. Evidence of a recent infection with *L. pomona* was found in paired sera from a meatworker in Tasmania.

One fatal case of leptospirosis due to *L. icterohaemorrhagiae* occurred at the Brisbane General Hospital in August, 1960. The patient was grossly jaundiced and had both pneumonia and renal failure.

An elderly woman living in a Brisbane suburb developed leptospirosis in January, 1960, and required hospital treatment. Her serum on two occasions showed antibodies for *L. icterohaemorrhagiae* in a titre of 1 : 300 and for *L. esposito* in titres of 1 : 1000 and 1 : 3000, respectively. As this agglutination pattern was unusual and *L. esposito* had not previously been recovered in Southern Queensland the source of infection was investigated. There was good evidence to suggest that the water supply to the house had become contaminated from a broken water main and numerous rats had been seen in the area.

During March, 1961, fourteen rats were trapped on the patient's property. Five of ten *Rattus norvegicus* showed antibodies to *L. icterohaemorrhagiae* and from two of these *L. icterohaemorrhagiae* was cultured. None of four *Rattus rattus* showed evidence of infection. With subsequent trapping a total of twenty-six rats and five bandicoots were examined. Nine of twenty-one *Rattus norvegicus* showed antibodies to *L. icterohaemorrhagiae* and from four of these leptospires were cultured. Two of five bandicoots exhibited serum antibodies in high titre but none of five *Rattus rattus* showed evidence of infection.

In view of the probability of infection with *L. icterohaemorrhagiae* from the rats in the area contaminating the water supply it seems far more likely that the patient's infection was due to this strain rather than *L. esposito*. Attempts to culture leptospires from the patient's blood or urine during the convalescent period failed.

TABLE CIX
TENTATIVE CLASSIFICATION OF PROBABLE LEPTOSPIRES CAUSING INFECTION IN 172 PATIENTS IN QUEENSLAND (1960-61)

Classification of Leptospire	Number
<i>L. icterohaemorrhagiae</i>	2
Member of Canicola serogroup	2
<i>L. zanonii</i>	10
"Robinson" type	2
<i>L. australis</i>	22
<i>L. esposito</i>	10
Member of Hebdomadis serogroup	4
<i>L. pomona</i>	109
<i>L. grippotyphosa</i>	1
<i>L. hyos</i>	10
Total	172

(c) Survey of animal reservoirs in North Queensland

The study of animal reservoirs of leptospires in North Queensland has continued in conjunction with the staff of the Field Station of the Queensland Institute of Medical Research. During the year agglutination-lysis tests were carried out on 1,211 sera which included 1,159 from wild animals, 47 from experimental animals and 5 from humans. Of the 1,159 sera from wild animals, 944 were from the mark-recapture experiments and 215 from the general survey.

The following strains of leptospires were isolated and identified from wild animals, either direct from kidney cultures or after passage through laboratory mice.

Species	Serotype identified
6 <i>Rattus s. conatus</i> ..	5 <i>australis</i> 1 "Robinson"
3 <i>Rattus rattus</i> ..	3 <i>zanoni</i>
3 <i>Rattus assimilis</i> ..	2 <i>australis</i> + <i>hyos</i> 1 <i>hyos</i>
1 <i>Melomys lutillus</i> ..	<i>zanoni</i>
1 <i>Isodon macrourus</i> ..	<i>zanoni</i>

The strain of *hebdomadis* serogroup from *I. macrourus* reported last year proved to be *L. mini*. Although not uncommon in the human population, this serotype has not been isolated before from wild animals. The isolation of *L. hyos* from *R. assimilis*, *L. zanonii* from *M. lutillus* and *I. macrourus*, and "Robinson" from *R.s. conatus* are new records for the particular hosts. One new record added during the year was the serological evidence of *L. australis* antibodies in a rain-forest rat-kangaroo, *Hypsiprymnodon moschatus*.

(d) Mixed Infection in Animals

Cultures derived from two rats, *R. assimilis*, as noted above, were found to consist of a mixture of two serotypes, *L. hyos* and *L. australis*. In one case the mixed culture was obtained from the rat's kidney, in the other from a first passage mouse inoculated with the rat's urine.

In both instances the early subcultures, which were made at intervals of a few days, had the serological characteristics of *L. hyos*. When subcultures were made less frequently both cultures took on the characteristics of *L. australis*. The addition of anti-australis immune serum to the culture medium inhibited the growth of *L. australis* and *L. hyos* reappeared. Further passage at weekly intervals for some months maintained the cultures as *L. hyos* but when left for several weeks and then subcultured they reverted to *L. australis*.

Both *L. australis* and *L. hyos* were grown directly from the original cultures with the aid of media containing inhibitory antibody. However several passages in such media at intervals were not sufficient to ensure the purity of the cultures. These observations indicate the advisability of adopting plating techniques in establishing culture lines.

(e) Identification of cultures from human sources

During the year three cultures from human infections were submitted from North Queensland. These were identified as *L. celledoni*, *L. australis*, and *L. pomona* respectively.

(f) Serological Survey from Southern India

A serological survey for the presence of leptospiral antibodies was made on 287 sera submitted from the Christian Medical College at Vellore, Southern India. Agglutination tests were done using leptospires from 33 different serotypes as antigens. The only significant leptospiral antibodies in this group of sera was in one which reacted in a titre of 1:30,000 to *L. andamana*.

(g) Leptospirosis acquired from soil

A soil scientist became infected with leptospirosis in Brisbane in November, 1960, after handling a soil sample. This soil had been collected in Mossman, North Queensland, and transported 1,100 miles, during a period of 48 hours. The infection that resulted had an incubation period of eight days and was most probably due to *L. grippotyphosa*. Whilst water has long been recognised as important in the transmission of leptospires from animals to man, as far as is known there are no reports of soil acting as an agent in transporting infection from one locality to another. The potential danger of handling soil samples without gloves is worthy of note. A report of this unusual case has been submitted for publication.

5. COMPLEMENT FIXING ANTIBODIES FOR THE PSITTACOSIS-LYMPHOGRANULOMA GROUP OF VIRUSES

The survey for complement-fixing antibodies to the psittacosis-lymphogranuloma group of viruses has continued. Since 1st January, 1959, all sera submitted from patients with pyrexias of unknown origin have been tested using an antigen prepared from the E.A.E. virus, a group-reactive antigen which will detect antibodies to many viruses within the group. In all cases where antibodies are demonstrated to this antigen an endeavour has been made to obtain information concerning the occupation, animal contact and environment of the patient.

To date 7,904 patients have been effectively tested and of these, 403 or 6 per cent. were found to have titres of 1:8 or greater and 89 of these had titres of 1:32 or greater. The distribution of the titres is set out hereunder:—

Titre	8	16	32	64	128	256	512
Number of patients ..	197	117	52	23	12	1	1
Percentage ..	48.8	29.0	12.9	5.7	3.0	0.3	0.3

In a control series of 1,000 sera from blood donors, supplied by courtesy of Dr. A. E. Shaw, 30 (3 per cent.) had antibodies in a titre of 1:8 or greater and 5 had titres of 1:32 or greater. The distribution of titres in the control group is set out hereunder:—

Titre	8	16	32	64
Number of patients ..	20	5	3	2

It is desirable that further sera be tested in the control group.

No clear indication has as yet been obtained regarding the significance of these antibodies in human sera in Queensland. Undoubtedly in some cases they indicate true infections with psittacosis and five such cases were diagnosed during the past year.

Certain information has been derived from our enquiries of the 403 patients showing titres to the group antigen and this is set out hereunder:—

Sex distribution—

Male	314	(77.9 per cent.)
Female	72	(17.8 per cent.)
Unknown	17	(4.2 per cent.)
Patients with known avian contact	104	(25.8 per cent.)
Patients without known avian contact	299	(74.2 per cent.)
Patients with known stock association	175	(43.4 per cent.)
Meatworkers	69	
Farmers	28	
Shearers	11	
Stock workers	39	
Q fever or <i>L. fomona</i> diagnosed	28	
Patients with no known stock association	228	(56.6 per cent.)
Of those with stock association—		
The number with avian contact also	39	
The number without avian contact	136	

This survey is to be continued during the coming year, and it is hoped that sufficient information may be available for publication.

6. SEROLOGICAL DIAGNOSIS OF SYPHILIS

The routine tests employed in the laboratory for the serological diagnosis of syphilis have been changed. The Kline, Kahn and Eagle Wassermann tests have been replaced by the Kolmer 1/5 volume complement fixation and the V.D.R.L. tests. In every case where one or both of these tests is reactive the serum is to be resubmitted for confirmation by a repetition of the above tests together with a Reiter protein complement fixation test.

7. BACTERIOLOGY

(a) Investigation of outbreak of diarrhoea in Port Moresby

At the request of Dr. Ryan of Port Moresby, rectal swabs were examined from 92 native children from Port Moresby to try and trace the cause of an outbreak of diarrhoea. From four, pathogenic coliforms were isolated but no pathogens could be isolated from the other specimens.

(b) *Salmonella* typing

We are indebted to the staff of the Institute of Medical and Veterinary Science for performing the typing of *Salmonellas* submitted from this laboratory. During the year certain of the cultures submitted have yielded interesting results. *Salmonella give* was isolated from a child of 10 years from Maryborough and also from a male of 36 at Stanthorpe. In the latter case there was a concurrent shigella infection. *S. anatum* was isolated from a child in Maryborough and *S. san diego* from a man at Cloncurry. An organism identified as either *S. edinburg* or *brazzaville* was recovered from a sample of imported coconut in August 1960. Four trainee nurses at Mackay hospital all became infected with *S. oranienburg*. *Salmonella chester* was isolated from a young child in Brisbane with recurrent diarrhoea.

From a six months old Brisbane child with diarrhoea an anaerogenic variant of *S. newington* was isolated and this was sent to Dr. Joan Taylor at Colindale. This organism aroused considerable interest as it was the first anaerogenic variant encountered.

(c) Naseptin trial

A trial of a anti-bacterial nasal cream, naseptin, was carried out at the Brisbane Women's Hospital from May to August 1960. One hundred and ninety-three members of the nursing staff were swabbed to determine the nasal carrier rate

of coagulase positive staphylococci and this was found to be 34 per cent. Those carrying phage type 80/81 or related strains constituted 20 per cent. of the staff and were treated with naseptin for one week. They were then reswabbed one week after treatment had ceased. It was found that 80 per cent. of the group no longer carried the 80/81 strain. Six weeks after the first swabs were taken the whole of the staff was again swabbed. It was now found that the nasal carrier rate of coagulase positive staphylococci was 35 per cent. and 21 per cent. of the staff carried phage type 80/81 or related strains.

(d) Wound infection surveys at Princess Alexandra Hospital

Surveys carried out at this hospital have been the combined effort of a sister especially seconded for the purpose from the School Health Services and the laboratory staff. The wholehearted co-operation of the Superintendent, surgical and nursing staff of the hospital has proved invaluable.

A preliminary survey of wound infection in two surgical wards was carried out between April and August, 1960. It was found that 11 per cent. of the patients who were examined had wounds draining profuse pus. Nasal swabs were taken from patients and the nursing and medical staff in both wards and operating theatres and it was found that:—

Thirty per cent. of the patients were nasal carriers of coagulase positive staphylococci on the day of operation.

Thirty-six per cent. of the patients were nasal carriers of coagulase positive staphylococci approximately five days after operation.

Forty-five per cent. of the nursing and medical staff were carriers of coagulase positive staphylococci.

A more complete survey of wound infection in surgical wards (Public and Intermediate) was begun in October, 1960. The survey in the Intermediate wards ceased in January but is still continuing in the Public wards. Operations are classified as "clean" or "potentially infected". A wound is considered infected if pus is seen in it, either while the patient is in hospital or, for public patients, when attending a special out-patient's clinic approximately three weeks after the operation. This follow-up after discharge from hospital is all important as without it the incidence of wound infection may prove to be misleadingly low. The surgeons attending patients in the Intermediate wards co-operated by returning a proforma describing the condition of the wound after discharge from hospital. This latter follow-up was, however, less satisfactory than the examination of one observer in the special clinic for Public patients and for this reason the survey of the Intermediate patients was discontinued after four months.

The results of this survey of wound infection are set out in Table CX.

It will be seen that there has been a remarkable and satisfactory reduction in the infection rate of both the clean surgical cases and in those potentially infected from the outset. This reduction in the infection rate is probably attributable to a number of factors. Of prime importance was the presence of the survey sister in the wards, stimulating interest and creating an awareness that a problem existed. This awareness was increased by discussions concerning the wounds, by lectures to the nursing staff, demonstrations of dressing techniques and by films.

Keen interest was shown in the progress report of the survey and healthy rivalry was developed between the two surgical wards involved. Extra care was taken with the cleansing of operation sites in the wards and in the use of dressing trolleys. Recently phisohex was applied to the skin before going to the theatre and hibitane to the drain sites post-operatively. Disposable dressings have been introduced and extra care taken with wound dressings. Overcrowding which was a serious problem early in the survey period has been reduced, and an isolation ward established for patients with suppurating wounds or obvious staphylococcal lesions. It is proposed to continue this survey until the end of 1961.

TABLE CX
SURVEY OF WOUND INFECTION AT PRINCESS ALEXANDRA HOSPITAL—(OCTOBER, 1960–1961)
Public Wards

Preoperative Classification					A ¹					B ¹				
					Total Patients	I ²	II ²	III ²	%III	Total Patients	I ²	II ²	III ²	%III
October	..	..	..	..	25	15	6	4	16	22	14	0	8	36
November	..	..	..	..	32	18	4	10	31	19	9	3	7	37
December	..	..	..	..	17	11	2	4	24	24	13	0	11	46
January	..	..	..	..	41	32	4	5	12	32	17	2	13	41
February	..	..	..	..	67	51	3	13	20	41	20	2	19	46
March	..	..	..	..	87	49	28	10	12	55	30	13	12	22
April	..	..	..	..	67	44	18	5	7	63	27	19	17	27
May	..	..	..	..	55	42	12	1	2	68	43	9	16	24
Ward G6—														
December	..	..	..	..	4	3	0	1	25	19	11	0	8	42
January	..	..	..	..	18	14	1	3	17	25	12	2	11	44
February	..	..	..	..	37	29	2	6	17	22	11	1	10	45
March	..	..	..	..	38	20	13	5	13	32	19	4	9	29
April	..	..	..	..	31	22	5	4	13	30	12	8	10	33
May	..	..	..	..	27	20	6	1	4	43	27	5	11	26
Ward M5—														
December	..	..	..	..	10	6	2	2	20	4	2	0	2	50
January	..	..	..	..	12	8	3	1	8	7	5	0	2	29
February	..	..	..	..	29	21	1	7	24	17	8	1	8	47
March	..	..	..	..	49	29	15	5	10	23	11	9	3	13
April	..	..	..	..	36	22	13	1	3	33	15	11	7	21
May	..	..	..	..	28	22	6	Nil	Nil	25	16	4	5	20
Intermediate Wards														
October	..	..	..	..	36	30	3	3	8	5	1	1	3	60
November	..	..	..	..	37	26	4	7	19	8	1	0	7	88
December	..	..	..	..	22	20	2	Nil	Nil	7	6	0	1	14
January	..	..	..	..	39	31	4	4	10	6	5	0	1	17

1. Preoperative Classification—
A¹. Clean operations.
B¹. Operations in which gastro-intestinal tract is opened or pus found at operation.
2. Postoperative Classification—
I². Absolutely clean.
II². Intermediate (red flush, stitch abscess, drain, &c.)
III². Discharging pus from wound site.

During the year air samples have been taken from time to time in the operating theatres and wards during periods of quiet and activity.

(e) Phage typing of staphylococci

Seven hospitals outside the Brisbane area, namely Longreach, Mackay, Mount Isa, Quilpie, Townsville, Warwick, and Wondai, submitted 110 cultures for phage typing, in all. Despite the fact that transport media is made available and this phage typing service is provided, the maximum use is not being made of it. Undoubtedly staphylococcal infections are still a major problem in maternity and general hospitals throughout the State, yet only in isolated cases are these adequately investigated.

Seven hundred and sixty-nine cultures of *Staphylococcus aureus* have been phage typed for the Veterinary School at the Queensland University where a survey of mastitis in cows is being conducted.

(f) The tuberculosis laboratory

There has been a 23 per cent. increase in the volume of work in this laboratory unit over the previous year. Many of the extra specimens have come from the Repatriation Department and the mental hospitals. It is anticipated that the work will continue to increase as the Mobile X-ray unit approaches the metropolitan area. Incubator space and laboratory accommodation have proved inadequate and already plans have been evolved for the provision of an additional laboratory and inoculation room. A new large incubator has been purchased.

During the year *Mycobacterium tuberculosis var bovis* has been isolated from three patients, one from Rockhampton and two from Brisbane.

Whenever atypical mycobacteria occur on two or more of the four culture tubes routinely inoculated from each specimen, they are specially investigated. In the period 1st July, 1960–30th June, 1961, 107 cultures of atypical mycobacteria have been isolated and the typing checked by Dr. Runyon. He classified these strains as being Runyon Group I.—3, Group II.—30, Group III.—65, and Group IV.—9.

At present no adequate study of these atypical mycobacteria can be undertaken due to pressure of routine work and limited accommodation, but it is hoped that a more detailed study may soon be possible.

Sensitivity tests are being performed on all newly isolated strains of *M. tuberculosis* as well as the atypical mycobacteria. Preliminary tests with ethionamid (trescatyl) have been commenced.

8. HISTOPATHOLOGY

An additional 2,099 biopsy specimens have been submitted for examination this year and from these there has been almost a 50 per cent. increase in the number of slides prepared during the year. The Radium Institute have been the source of 2,426 of the biopsy specimens. With very few exceptions the reports are made available in less than 48 hours.

Amongst the routine biopsy and post mortem material examined during the year the following are of interest:—

- Pulmonary Torulosis (2 cases).
- “Cat-scratch” lymphadenitis (5 cases).
- Chromoblastomycosis (3 cases).
- Amniotic fluid embolism.
- Pulmonary mucormycosis.
- Radiation nephritis.
- Chorionepitheliosis.
- Honeycomb lung.
- Myocarditis in infancy and young adults.

There has been a 74 per cent. increase in the number of specimens submitted for exfoliative cytology. The demand for this service is steadily increasing and this places a heavy burden on the one medical officer who, to date, has been responsible for this work. It will probably be necessary in the near future to have a technician trained as a scanner, to ease the load on the one pathologist. Since this cytology service began a most satisfactory degree of accuracy has been achieved, as revealed by a follow-up of the patients concerned.

9. THE INSTITUTE OF FORENSIC PATHOLOGY

The opening of this Institute constitutes a most important milestone for the Department of Health and Home Affairs and for Forensic Pathology in Australia.

Facilities for the conduct of autopsies are excellent, and ancilliary aids in the form of a laboratory, X-ray and photography are at hand. Refrigeration capacity should be adequate to cope with any demands in the foreseeable future.

The dissecting room is large enough to accommodate students and in addition there is a special demonstration theatre. Here demonstrations in autopsy technique are provided for medical students and regular instruction given to police recruits. Students attend the autopsies for most of the year. The entrance, waiting room and viewing room provided for the public are both dignified and attractive. The whole building is pleasant, functional and well designed.

It is hoped to pursue an active programme of investigational work in forensic pathology and in the investigation of sudden death. Already several projects have been started.

10. PUBLICATIONS

Dwyer, R.St.C., Tonge, J.I. and Hoffman, T.R. (with Scott, W., Derrick, E.H. and Pope, J.H.), (1960): "A Remarkable Outbreak of Q fever", *Med. J. Aust.* 2. 456.

Smith J.W. (with Addamians, L. and Babudieri, B.) (1960): "Zwei neue zur Gruppe *Leptospira canicola* gehörige Sterotypen", *Zentralbl. Bakt.* 189, 419.

Tonge, J.I. and Smith D.J.W., (1961): "Leptospirosis Acquired from Soil," (in the press).

QUEENSLAND GOVERNMENT CHEMICAL LABORATORY, 1960-61

Director, Government Analyst and Chief Inspector of Explosives: S. B. WATKINS, M.Sc., F.R.A.C.I., to 31st December, 1960. I. L. B. HENDERSON, B.Sc., A.R.A.C.I., from 9th March, 1961.

Deputy Director and Inspector of Explosives: A. S. HURWOOD, B.Sc., F.R.A.C.I., A.R.I.C.

The Government Chemical Laboratory provides a chemical service for all Queensland Government Departments with the exception of the Department of Agriculture and Stock which maintains its own specialised laboratory service. At least twenty-five Government Departments and Semi-Governmental Authorities utilize the service of the laboratory. In addition the laboratory carries out all the work in Queensland for the Commonwealth Department of Customs and Excise and the Commonwealth Department of Primary Industry and also performs analyses for other Commonwealth Departments. These services are charged to the Commonwealth.

ACCOMMODATION

Additional accommodation on the side verandah of the Colchester Street laboratory has enabled the complete Water Section to be located there, thus easing the position slightly in the Foods and Drugs Section. Congestion in the Ores Section still remains a problem and conditions for those personnel undertaking the coal washing investigations leave much to be desired, particularly in bad weather.

EQUIPMENT

The Avery Textile Testing Machine is now operating in an air-conditioned room giving the required standard conditions for textile testing. The spectrophotometer covering the ultra-violet and visible spectrum is now also operating in a conditioned room and provision is made in this room for an infra red spectrophotometer which it is hoped to purchase this year. A gas chromatograph has recently been received and installation is almost complete.

SAMPLES

A record total of 27,553 samples was examined for the year. This is an increase of 3,267 samples as compared to the previous year.

SECTION I

FOODS, DRUGS AND WATERS

A. S. HURWOOD, B.Sc., F.R.A.C.I., A.R.I.C.,
Deputy Director—Officer in Charge

Table CXI gives the source and number of the samples examined: —

TABLE CXI

Department	Number of samples
Health and Home Affairs	5,865
Irrigation and Water Supply	1,222
Other Government Departments	555
Local Government	59
Public	239
Total	7,940

TABLE CXII

SUMMARY OF SAMPLES OF FOODS AND DRUGS EXAMINED FOR THE DEPARTMENT OF HEALTH AND HOME AFFAIRS

Nature of Sample	No. of Samples
Beverage or Cordial	409
Bread	347
Cereal	56
Confectionery	49
Crayon or colour pencil	99
Disinfectant	31
Drug or Medicine	228
Fruit or fruit juice	37
Meat	408
Milk—official	2,176
Milk—unofficial	137
Milk product	81
Paint or paint scraping	550
Spirituos Liquor	30
Tobacco	117
Toy	272
Vegetable	17
*Miscellaneous	437
Total	5,481

* The miscellaneous samples include ginger, methyl bromide, brine, mushroom, grass, molasses, copra, rat-bait, tooth brush, marking ink, drinking glass, plastic jar, condiment, cake mix, jam, and toilet preparation.

TABLE CXIII

DETAILS OF LEGAL SAMPLES TAKEN BY INSPECTORS IN ACCORDANCE WITH THE PROVISIONS OF "THE HEALTH ACTS, 1937 TO 1959 "

Nature of Sample	Number Examined	Passed	Failed
Milk	2,176	2,045	131
Paint and paint scraping	416	173	243
Minced meat	261	166	95
Toy	223	50	173
Sausage	58	41	17
Bread	19	14	5
Cream	14	14	..
Spirituos Liquor	13	1	12
Drug	9	9	..
Soft Drink	7	6	1
Flour	1	1	..
Ant Poison	1	1	..
	3,198	2,521	677

MILK

The overall quality of the milk supply from town and country centres was good. Of the 2,176 legal samples examined 94 per cent conformed with official requirements, 4.2 per cent. were deficient in fat, 1.3 per cent. were naturally poor milks and 0.5 per cent. contained extraneous water. The proportion of watered milks was the lowest on record. The watered milks, 12 in number, came from Brisbane (2), Cairns (2), Toowoomba (1), Townsville (1), Palmwoods (1), Nambour (1), Mackay (1), Maryborough (1), Pomona (1), Gympie (1). The average fat content for the year was 3.89 per cent. compared with an average over the last ten years of 3.93 per cent.

MEAT

The intensive sampling of minced meat and sausages by Health Inspectors led to a record number of submissions of these foodstuffs. More frequent sampling and heavier fines have resulted in a somewhat improved position regarding preservative in minced meat.

BREAD

In this section of the work 347 samples were examined. Quality surveys of bread were carried out in 29 country centres including Helidon, Caloundra, Kuranda, Innisfail, Redcliffe, Booval, Maryborough, Theodore, and Crow's Nest and for the main part the results were satisfactory.

The Weights and Measures Department submitted 123 loaves of bread for determination of dry solids content. Bread Weight in Queensland is now determined on a dry solids basis. This new legislation was introduced in 1957 and has given every satisfaction to all parties concerned and the baker gets a better deal than ever before.

Of 44 samples of bread, sold as milk bread, 9 samples failed to contain the prescribed minimum proportion (4 per cent.) of non-fat milk solids in the water free substance.

FLOUR

The quality of ordinary bakers flour milled in Queensland was consistently good and the high average protein content of 12.6 per cent. was a distinct improvement on last year. From specially selected wheats the miller had no difficulty in producing protein rich flour containing 2.7 per cent. nitrogen in the water-free substance, this being the prescribed minimum nitrogen content for protein-rich flour.

DRUGS AND MEDICINES

The work followed the pattern of other years and 228 samples in all were examined.

Drugs were checked for purity against official standards and the compositions and claims of new proprietary lines were examined. Medicines were checked for accuracy in dispensing and complaint samples from the public examined. Old stocks of deteriorated dangerous drugs from various pharmacies and hospitals were checked for identification and quantity for record purposes and then destroyed.

No serious issues were involved with any of the samples.

SOFT DRINKS

Soft drink surveys were made in 30 country centres, including Bundaberg, Longreach, Cairns, Clifton, Oakey, Gladstone, Emerald, Esk, Blackall, and Toowoomba and 409 samples were examined.

These drinks are sold in huge quantities throughout the State and consumed largely by children. Consequently a close watch is kept on the purity of the products.

No serious trouble was associated with any of the samples.

SEARCH FOR LEAD

Intensive sampling was again carried out by Health Inspectors on substances likely to contain lead and likely to come within the reach of a child.

Paints, paint scrapings, toys, coloured pencils and crayons to a total number of 921 samples were examined for lead content under this heading.

WORK FOR MISCELLANEOUS GOVERNMENT DEPARTMENTS

Heavy demands were made on the Section by Government Departments other than the Department of Health and Home Affairs.

Tender and contract samples of foodstuff were examined for the Department of the Army, loaves of bread for the Weights and Measures Department and drinking straws for the Education Department. Cornflour was examined for the Premier's Department, apples for the Department of Agriculture, soap and detergents for the Postmaster-General, and goods for freight classification purposes from the Railway Department. Further submissions were received from the State Storekeeper, the Police Department, the Health Department Rabaul, and from a number of Hospital Boards.

MISCELLANEOUS

The position relative to spray residues on fruit and vegetables was satisfactory, judged by the few complaint samples received.

Twelve legal samples of spirituous liquor comprising gin (4), Whisky (4) and rum (4) were adulterated with water.

A Queensland industry was assisted in obtaining an attractive caramel colouring for its ginger products.

Experimental work was carried out in connection with the use of aniline marking ink in hospital laundries.

Of six samples of suspected ambergris from Queensland beaches two only were genuine.

Two samples of hair dye were condemned because of the presence of paraphenylene diamine in the one and lead compounds in the other.

Certificates of purity were issued in connection with the export of arrowroot flour and ginger products.

Samples of fireworks were condemned as unfit for sale under The Poisons Regulations of 1958, because of the presence of arsenic.

There were 25 submissions in connection with the presence of foreign substances in food, including glass in bread, plastic particles in jam, and tobacco in a chicken roll.

Oranges were checked for artificial colouring. The artificial colouring of citrus fruits with citrus red No. 2 (1 — (2·5 — dimethoxy phenylazo — 2 naphthol)) is now permitted provided that the words "artificially coloured" are stamped on the skin of each fruit.

The phosphoric acid (P₂O₅) content of six varieties of genuine apple pulp gave the following results in parts per centum. Delicious (0·017), Tasma (0·012), Jonathon (0·009), Granny Smith (0·013), Democrat (0·015), and Fancy Sweet (0·014).

Following a complaint of the presence of logwood in tea, 17 brands of tea were examined. None of the samples contained logwood or other foreign dyestuff and all conformed with the prescribed standard for tea.

Samples of rags, detergents and insecticides were examined under "The Bedding and Upholstery Regulations of 1948", "The Cafe Regulations of 1952." and "The Health (Insecticides) Regulations of 1953" respectively.

Prepared tobacco samples to a total number of 117 were examined. They comprised contraband cigarettes from the Queen's Warehouse and tender samples of tobacco from the State Storekeeper.

The particle size of a number of washing powders was determined in connection with a dust nuisance at a hospital laundry.

Various coal tar dyes were checked by spectrophotometric analyses to ensure purity and conformity with the Food and Drug Regulations.

There was an increase in work of a consultative and advisory nature and an increase in the number of conferences and interviews held on subjects connected with foods and drugs.

WATERS

Two thousand two hundred and fifty-seven samples of water, sewage, and industrial waste were examined during the year,

The various sources of samples and their corresponding numbers are given in the following Table:—

TABLE CXIV

Source	Number of samples
Water—	
Department of Health and Home Affairs ..	384
Irrigation and Water Supply Commission ..	1,222
Department of Local Government	59
Department of Harbours and Marine	159
Miscellaneous Government Departments ..	87
Public	222
Sewage and Industrial Waste—	
State Government Departments	88
Commonwealth Government Departments ..	36
Total	2,257

There was a considerable increase in the number of samples submitted by the Health Department, due mainly to the carrying out of a monthly survey of the dissolved oxygen content of the Brisbane River to check any significant pollution of the river water. Samples were taken at three points, at Indooroopilly Bridge, William Jolly Bridge and in the Hamilton Reach.

The number of Irrigation and Water Supply Commission samples reported was lower than that of the previous year, but the determination of the Electrical Conductivity (which had not been carried out before) of most of these samples meant extra work.

The dry weather which prevailed for most of the year caused an increase in the number of samples submitted by the public, and a decrease in the samples from the Department of Harbours and Marine.

SECTION 2
TOXICOLOGY, BIOCHEMISTRY, INDUSTRIAL HYGIENE AND AIR POLLUTION

G. LAHEY, M.Sc., A.R.A.C.I.—Acting Officer in Charge

The total number of specimens submitted for examination by this section was 4,209.

TOXICOLOGY

Of a total of 474 specimens examined during the year, 323 were in connection with 127 post-mortem examinations. The majority of these examinations were at the request of the Coroner.

Poisons found included barbiturate (48), Chloral (4), Strychnine (3), Arsenic (3), Cyanide (2). Of the remaining examinations 54 did not disclose any poison, but were considered necessary to exclude poison as a possible cause of death.

The Police Department submitted 123 specimens of blood and urine for alcohol determination chiefly in connection with road accident investigations.

Five specimens of horse and dog viscera were examined, and 4 suspected poison baits. Miscellaneous specimens included foodstuffs, anaesthetics, drugs.

Evidence in court was given in a number of cases.

BIOCHEMISTRY

Biochemical specimens were examined for the Laboratory of Microbiology and Pathology, Government Medical Officers, The Director of Industrial Medicine, Hospitals, and medical practitioners.

The nature, significance and number of such specimens are shown in the following Table:—

TABLE CXV

Nature of specimen and significance	Number of specimens
Blood and urine, for alcohol or other drugs ..	1,226
Urine for lead	1,691
Bone for lead	35
Hair, nail and urine for arsenic	44
Blood for carbon monoxide	9
Miscellaneous	150
Total	3,155

The miscellaneous item includes a large number of investigations of stomach washings for the presence of ingested drugs, mainly of the sleep-inducing type,

Determinations of alcohol in blood and urine are carried out for the Government Medical Officer—the majority in connection with charges against motorists—and for the Government Pathologist, who submits postmortem specimens in appropriate cases.

INDUSTRIAL HYGIENE

Excluding biochemical specimens, the number of samples examined was 258.

Investigations undertaken during the year included:—

Ventilation surveys in a suburban grocery store, a powerhouse, and a newspaper printing room.

Investigation of the application of an epoxy paint in an unventilated room.

Investigation of the removal of scale from railway water tanks.

Sulphur Dioxide tests in a plant manufacturing Sulphuric Acid.

Formaldehyde tests in a suburban tannery. Styrene tests in a fibre glass factory.

Nitrous fume tests at an open cut colliery.

Tests for lead in air and zinc fume in Railway Workshops.

A dust survey in a coal mine.

In addition, a full scale survey was conducted at Mount Isa for the Industrial Court, similar to that conducted in 1959. This involved the analysis of 151 atmospheric samples for temperature, air velocity, dust or lead and 249 specimens of blood or urine for lead.

AIR POLLUTION

The number of samples examined during the year was 322.

A survey of deposited pollution and smoke in Brisbane is continuing.

A survey of deposited pollution in the Industrial area of Maryborough is continuing. This involves monthly examination of deposit from four deposit gauges in Maryborough.

Assistance was given to the State Electricity Commission in connection with an enquiry into Air Pollution in South Townsville.

SECTION 3

MINES, MINERALOGY, METALLURGY and EXPLOSIVES

V. R. CUNDITH, B.Sc., A.R.A.C.I.,
Officer in Charge

Table CXVI. shows the sources of work done by this Section and the number of samples from each to account for the total of 7,469 samples.

TABLE CXVI

Department	Number of Samples
Geological Survey and Mines Department ..	1,726
Coal Board	413
Portmaster (Explosives)	4,577
Other Departments	593
Public	124
Commonwealth Departments	36
Total	7,469

MINES DEPARTMENT AND GEOLOGICAL SURVEY

General

Samples of ore were examined for estimations of copper, lead, zinc, nickel, arsenic, bismuth, tin, antimony, manganese, uranium, thorium, and rare earth oxides, &c.

In addition there were the usual assays for gold, silver and cyanidation tests.

ANALYSES

—	1	2	3
<i>Manganese Ore—</i>	Per Cent.	Per Cent.	Per Cent.
Manganous Oxide (MnO) ..	72.44	65.15	66.16
Available Oxygen (O ₂) ..	15.18	13.43	13.12
Silica (SiO ₂)	0.53	0.60	5.41
Ferric Oxide (Fe ₂ O ₃)	3.77	0.72	2.27
Barium Oxide (BaO)	1.15	0.72	0.25
Potassium Oxide (K ₂ O)	0.38	3.18	0.82
Hygroscopic Water — H ₂ O ..	1.72	1.19	1.78
Combined water + H ₂ O ..	2.79	3.89	3.08
<i>Chloropal—</i>			
Loss on Ignition	17.5	..	..
Silica (SiO ₂)	50.9	..	..
Ferric Oxide (Fe ₂ O ₃)	20.5	..	..
Alumina (Al ₂ O ₃)	7.3	..	..
	96.2		
<i>Talc Schist ex Mourilyan Harbour—</i>			
Silica (SiO ₂)	59.1	..	..
Iron (Fe ₂ O ₃)	4.4	..	..
Alumina (Al ₂ O ₃)	5.0	..	..
Loss on Ignition	4.2	..	..
Magnesia (MgO)	27.4	..	..
Lime (CaO)	Nil	..	..

SHALES AND CLAYS

The Government Geologist submitted 302 samples of shale and clay for examination as to suitability for the manufacture of bricks, pipes, tiles, whiteware and light weight aggregate for concrete.

Expanded Shale—bloating clays

Bloating clays and shales when fired at temperatures 1,200 deg. C.—1,300 deg. C. yield a scoriaceous light-weight material which can provide a concrete of high strength, low absorption, low shrinkage, good elasticity and durability. It reduces the dead-weight of a structure and thus less structural steel is needed for support.

Ordinary concrete with sand and gravel weighs about 150 lb. per cubic foot, whereas concrete with light-weight expanded shale weighs approx. 100 lb. per cu. ft.

Most of the above samples were given fire tests to determine their application for this purpose.

COLLIERY VISITS

Visits were made to collieries to test quality of the ventilating air supply.

These also included an examination of a 25-h.p. diesel locomotive operating underground, to determine any hazard in respect of air contamination by the exhaust gas.

Tests were made for carbon monoxide, oxides of nitrogen, sulphur dioxide and formaldehyde.

OIL AND GASES

Samples of mine air were received from the collieries and bore gases, oils, sludges and waters were received in connection with “search for oil” projects.

The atmosphere at the site of a small outburst at the State Coal Mine, Collinsville assayed:—

	Per cent.
Carbon dioxide (CO ₂)	37.2
Oxygen (O ₂)	12.9
Methane (CH ₄)	0.54
Nitrogen (N ₂)	49.4

COAL

The coal and coke work continues to maintain pressure due to drilling activities maintained by the Mines Department.

Calorific Value, proximate and ultimate analyses, ash, fusion point of ash, specific gravity, sulphur, and swelling indices are usually required by the Government Geologist whilst washability tests, proximate analyses and ash are the main requirements for the Coal Board.

COAL BOARD

In addition to the above, analytical work, sink and float tests were undertaken for the Coal Board in connection with their colliery and field investigations. These have included the Kianga, Moura, Mungi coal fields in the search to locate reserves of coking coal suitable for export.

Coal Analyses							Volatile Matter (dry ash free basis)
							Per Cent.
Ex Kianga	..	..	..	..	..	..	35.2
Ex Gibihi	..	..	..	..	..	..	33.8
Ex Moura	..	..	..	..	..	..	29.3
Ex Mungi	..	..	..	..	..	..	22.9
Ex Baralaba	..	..	..	..	..	..	13.5

The decrease in volatile matter contents shows that folding in the northern end of the field has had the effect of increasing the rank of the coal from the volatile bituminous at Kianga to the semi-anthracite at Baralaba.

COAL ASH ANALYSES

								Selene	Blair Athol	Haighmoor	Moreton
								Per Cent.	Per Cent.	Per Cent.	Per Cent.
Silica (SiO ₂)	..	..	..	..	..	..	..	50.80	62.60	63.04	71.20
Alumina (Al ₂ O ₃)	..	..	..	..	..	..	..	37.90	31.73	30.27	16.65
Ferric Oxide (Fe ₂ O ₃)	..	..	..	..	..	..	..	3.43	2.0	3.15	4.15
Titanium Oxide (TiO ₂)	..	..	..	..	..	..	..	1.25	1.4	1.46	1.00
Manganese Oxide (Mn ₃ O ₄)	..	..	..	..	..	..	..	0.02	nil	0.06	0.06
Calcium Oxide (CaO)	..	..	..	..	..	..	..	2.42	1.13	0.46	3.40
Magnesium Oxide (MgO)	..	..	..	..	..	..	..	1.20	0.28	0.24	1.48
Sodium Oxide (Na ₂ O)	..	..	..	..	..	..	..	0.55	0.17	0.15	0.10
Potassium Oxide (K ₂ O)	..	..	..	..	..	..	..	0.36	0.22	0.38	0.41
Phosphate (P ₂ O ₅)	..	..	..	..	..	..	..	1.12	0.27	0.12	0.20
Sulphate (SO ₃)	..	..	..	..	..	..	..	0.76	0.43	0.24	1.65
Fusion Point of Ash—											
Softening Point °C	..	..	..	..	..	..	..	..	1,490	1,450	1,080
Melting Point °C	..	..	..	..	..	..	..	..	1,560	1,550	1,170

It is of interest to note the closeness of composition shown by the ash from the Blair Athol (Permo. Carboniferous) and Haighmoor (Triassic) coals which were taken from coalfields over 500 miles apart.

The effect of the higher proportions of silica and basic contents, and decrease of alumina in the ash of the Moreton coal is shown in the low melting point.

OTHER DEPARTMENTS

The consultative and analytical work from Government Departments covered a range of industrial products, metals, concrete, dust, cutlery, galvanised iron, tiles, bricks, plated metal, corrosion problems, Golden Casket discs, producer gas, reactivity of aggregate tests.

Assistance was given to the Chief Inspector of Machinery in the investigation into kerosene refrigerator fires.

All of the 224 concrete roofing tiles conformed with the specification in respect of the colours used in or on them.

The bulk of the concrete analyses was for the Queensland Housing Commission in connection with the checking of aggregate cement mixes used for concrete stumps.

Concrete analyses, examinations of filter sands were carried out for the Department of Local Government

Aviation oxygen supplies to the R.A.A.F. were regularly tested throughout the year. All samples conformed with the specification.

Reactivity of aggregate for cement

The potential reactivity of crushed samples of aggregate with alkalis in Portland cement was determined on a number of samples.

In this test, the -50 +100 mesh B.S.S. sample is treated with standard sodium hydroxide solution in stainless steel reaction chambers at 80 deg. C. for 24 hours.

The reduction in alkalinity and dissolved silica provide a guide as to suitability for use.

Sand for glass manufacture

Samples of sand examined to determine suitability for plate glass manufacture were found to have excessive proportions of iron, insufficient silica and too great a proportion coarse and fine material.

It might be mentioned that selected Moreton and Stradbroke Island sand contains 96-99 per cent. silica, 0.06-0.12 per cent. iron oxide and 96 per cent. of the sand passes a 52 mesh B.S.S. and the minus 100 mesh B.S.S. portion ranges up to about 3 per cent.

The uniformity of both composition and grain sizings together with the plentiful supply available, would provide industry with ample reserves of suitable raw material for window and plate glass manufacture.

ANALYSES COAL EX ACLAND COLLIERY

	Per cent.
Moisture at 105 deg. C	4.5
Volatile Matter	41.4
Fixed Carbon	40.3
Ash	13.8
100.0	
Equilibrium Moisture	6.5
Total Sulphur	0.44
Sulphate Sulphur	0.005
Pyritic Sulphur	0.064
Organic Sulphur	0.37
Phosphorus	0.044
Chloride	0.002
Arsenic p.p.m.	2.2

Equilibrium moisture (bedding moisture) is the moisture of conditioned coal determined under controlled humidity of 97 per cent. at 30 deg. C. It indicates moisture holding capacity.

The following extract is taken from a report:—

SECTION 4

FEDERAL DEPARTMENTS, STATE STORES, PUBLIC WORKS, HOUSING COMMISSION, MAIN ROADS, &c.

J. ADAMSON, A.R.A.C.I., Chief Chemist, Officer in Charge

The following table is a detailed list of the samples examined by this Section:—

TABLE CXVII

Customs and Excise	..	..	..	2,026
Primary Industry	..	..	..	1,606
Public Works Department	..	..	..	1,473
Housing Commission	..	..	..	1,261
State Stores	..	..	..	661
Main Roads Department	..	..	..	140
Explosives (fireworks)	..	..	..	480
Other Government Departments	..	..	..	286
Public	..	..	..	2
Total	..	..	..	7,935

There was a marked increase in the number of samples examined by this section chiefly attributable to the increase in the number of paint samples submitted by the Works Department and the Housing Commission. For the first time work done for State Departments has exceeded that carried out for Federal Departments. The work submitted by the Customs and Excise Departments continues to be of a very diverse nature and including many new and interesting items particularly in the plastics field.

The Department of Primary Industry submitted a large number of samples for examination in connection with the maintenance of export standards. It is very important that these standards should be maintained and particularly in times when conditions favour the buyer.

There was a phenomenal increase in the number of samples submitted by the Public Works Department and Housing Commission. The great majority of the paints were of satisfactory composition. During the year an officer of the section designed and fabricated an ingenious piece of apparatus for the electrolytic determination of lead in paint pigments. This apparatus has "speeded up" this determination considerably.

The nature and amount of work from the State Stores Board was similar to that of previous years. The new tensile strength machine has been installed in an air-conditioned room. A number of fireworks which contravened the regulations were rejected.

DIVISION OF NURSING

Adviser in Nursing: D. BARDSLEY, F.C.N.A., R.A.N.F., to 30th December, 1960. E. W. S. SULLIVAN, R.A.N.F., from 2nd May, 1961.

Miss D. Bardsley retired from the position of Adviser in Nursing on December 31st and was succeeded by Mrs. E. W. S. Sullivan in May, 1961. The excellent manner in which Miss Bardsley established the Division of Nursing has made the task of taking over the Division a comparatively easy one.

In Queensland there has been a decided improvement in the situation regarding student nurses and many hospitals now have waiting lists. Many of these girls have been educated to Junior Public standard and some to Senior Public standard. There is a world wide movement to improve nursing schedules of training and most countries are taking more specialities into their nursing curriculum.

At the Twelfth Quadrennial Congress of the International Congress of Nurses much discussion was provoked by a proposed amendment to the I.C.N. Constitution and By-laws that "such national associations shall include only professional nurses." The next paragraph included "A professional nurse is one who has completed a comprehensive nursing preparation in an approved school of nursing . . . to equip the nurse to care for people of all ages in the promotion of health and in all forms of sickness both physical and mental." This amendment was strongly supported by nurses from overseas. In the United States, where there is a shortage of bedside nurses, many nurses obtain their qualifications from universities. Their curriculum includes little bedside experience. In England there is a section of the nursing profession who would like to follow the American curriculum, forgetting that the first duty of a nurse is to nurse, and it is to be hoped the Queensland curriculum will not be altered to make it a specialist curriculum.

The Annual Conference of the Matrons' Association was held in Brisbane from 8th to 12th May, 1961, inclusive. Approximately 79 Matrons were present from all parts of the State. The conference was officially opened by the Minister for Health and Home Affairs, the Honourable H. W. Noble. Considerable time was spent discussing the curriculum. The Deputy Director of Health and Medical Services, who is Chairman of the Special Committee on Nursing Education and Training, addressed the Conference on this matter, and the Matrons have requested that the curriculum presented by them in 1958 with some additions and alterations be accepted as interim curriculum until such time as more Schools of Nursing are established, and qualified tutors are available to teach a more extensive curriculum.

The lecturers included Mrs. Jayawardina, Consultant to the National Nursing Education Division, who addressed the Matrons on her proposed survey into wastage of nurses. Another important meeting attended was that of the Royal Australian Nursing Federation. Because of the long distances which must be travelled, few Matrons get the opportunity of being present at quarterly meetings when many subjects which affect their hospitals are discussed. It is advisable when the opportunity offers, for Matrons to attend and take an active part in the discussions, and at all times to read their journal and enter into correspondence on questions decided upon in their unavoidable absence.

The Division has continued to give advice both by correspondence and personal interview to girls wishing to take up nursing as a career, to overseas and interstate nurses who are interested in nursing in Queensland, and to girls who have given up their training and wish to commence again. Now that so many hospitals have waiting lists for student nurses, it is becoming increasingly difficult for these girls to find a hospital who will enable them to re-commence their training. The Adviser in Nursing recommends that girls before resigning communicate with her so that advice in regard to opportunities can be given.

Eventide Home at Sandgate, Southport Hospital, the chronic section of Princess Alexandra Hospital, and the after-care hospital for mothers and babies at Corinda have been visited. An inspection of country hospitals in the North and West of the State will be made early in the coming financial year.

STUDENT NURSE WASTAGE

The Division has continued the survey into student nurse wastage and statistics are contained in Table CXVIII.

An analysis of the published figures shows that 3,087 student nurses were enrolled in the various grades in 1960, as against 2,634 in 1959, an increase of 453. 705 student nurses resigned or were retired. This is the lowest percentage for the past three years, the figures being 22.5 per cent. in 1960, 25.01 per cent. in 1959, and 26.3 per cent. in 1958. For some time the minimum standard of 8th Grade education has been used as one of the principal reasons for student nurse wastage, but the figures for 1960 show that of the total of 705 student nurses, who ceased nursing, 367 or 52.05 per cent. were educated to Sub-Junior, Junior, or Senior standard.

TABLE CXVIII.—WASTAGE OF STUDENT NURSES—QUEENSLAND HOSPITALS FOR THE YEAR 1960

Hospital	Daily Average	Student Enrolment					Total Year, 1960	Wastage of Students					Per-centage of Total	Age Groups						Educational Standard					Reason given for Leaving							
		1st	2nd	3rd	4th	5th		1st	2nd	3rd	4th	5th		Total	17 and under	18	19	20	21 +	Not known	8th and under	Sub-Jnr.	Jnr.	Above Jnr.	Not known	Not suited	Fail Exams	Mar-riage	Per-sonal	Health	Do-mestic	Others **
Atherton	63.2	9	13	6	7	..	35	1	..3	..2	..1	..	1	2.8	..	..	..	..2	..	..5	..	..1	..	..	..	..2	..2	..1	..	..	1	
Ayr	55.56	7	7	4	2	..	20	..	..	..	..	6	1	30.0	..	..	..	..	..1	..	..	..	..	..	..	..	..	..	..	..	1	
Barcaldine	10.63	2	3	2	..	..	7	..	..1	..	..	..	..2	13.3	..	..	..	..	..	..2	..	..	..	..	..	..	..1	..	..	..	..	
Beaudesert	28.91	4	4	6	..	..	15	1	..	..	..	4	..	80.0	..	..	..	..	..	..3	..	..	..	..	..	..1	..2	..	..	..	..	
Biloela	22.38	5	..	..	..1	..	5	1	3	..	..	3	..	30.0	..	..	..	..1	..	..	..	..	..	..	..	..	..	..	..	..	..	
Blackall	17.88	5	..	..	..1	..	10	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Boonah	18.67	3	3	1	1	..	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Bowen	21.11	5	..	..	..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Brisbane Hospital	1,799.34	225	171	109	88	..	593	109	77	16	13	..	215	36.2	38	74	56	22	25	..	93	22	87	11	2	27	20	23	5	24	5	106
Brisbane Women's Hospital	314.05	280	2	..	..	..	282	43	1	..	..	..	44	15.6	..	..	..	1	43	..	8	4	19	4	9	1	..	9	2	5	3	24
Bundaberg	111.89	25	23	15	7	..	70	12	11	..	..2	..	29	41.4	..2	..4	6	6	11	..	13	6	9	1	5	..	..	9	2	2	9	24
Cairns	137.42	22	25	16	10	..	73	10	6	2	1	..	19	26.02	1	7	4	..	7	..	7	2	8	1	1	..	..	4	3	..	3	8
Charleville	44.53	17	4	5	5	..	31	No Statistics	..	..	..	..	..	16.6	..1	..2	..	..1	..	..1	..2	..1	..	..	..	..	..	..3	..1	..	..	..
Charters Towers	33.36	7	7	4	6	..	24	2	..	..	..	..	4	14.3	..	..	..	..	..	..	..	..	..	..	..2	..	..	..1	..	..	..	..
Chinchilla	31.13	5	5	3	8	..	21	2	..	..	..	..	3	14.3	..	..	1	..	..	..	..	..	..	..	..	..	..	..1	..	..	..	..
Clermont	23.89	2	..	..	..	..	4	..	..	..	..	..	1	25.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cloncurry	29.9	3	1	..	..	..	4	..3	..2	..	..	..	..5	55.5	..2	..	..2	..	..	..4	..2	..1	..	..	..	..	..	..4	..1	..	..1	..2
Collinsville	24.08	3	5	7	..2	..	9	1	3	..3	..1	..	8	38.1	1	..2	2	1	..2	..	3	..2	3	..	..	..	..	..1	..	..1	..	..
Dalby	42.92	6	6	2	..	..	21	1	2	..	..1	..	4	59.1	..1	1	2	1	1	..	1	..	..	..	..	..	..1	..	..1	..1	..	..1
Gayndah	15.82	5	7	4	..3	..	26	2	..2	..	..	..	6	23.1	..1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gladstone	35.38	12	4	5	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Goondiwindi	23.42	6	4	..	..	..	15	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Greenslopes	435.8	24	13	13	15	..	65	11	..4	..3	..	..	18	32.7	..2	..6	..2	..3	..5	..	..5	6	..6	..1	..	..2	..	..2	..1	..	..	..6
Gympie	96.71	19	15	15	6	..	55	..	..	..	..	..	2	11.1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Herberton	19.75	10	2	3	3	..	18	..3	..	..	..	..	..	..	..2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hughenden	43.7	7	10	..	1	..	..	..	..	..	..	..	..3	16.6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ingham	89.64	13	19	8	15	..	55	..	..	..	..	..	..	..	..2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Innisfail	13	19	31	20	19	..1	94	..	..2	..1	..1	..	..4	4.2	..	..	..1	..	..3	..	..	..	..	..	..	..	..	..2	..	..	..	..1
Ipswich	161.62	24	3	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Isis-Childers	14.85	3	3	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Kilcoy	19.2	1	4	..	1	..	24	..	..2	..1	..1	..	..	..	..	..	..2	..	..	..	..	..	..2	..	..	..	..	..	..	..	..	..2
Kingaroy	40.68	11	3	3	7	..	10	..	..	..	..	..	4	16.6	..7	..1	..2	..1	..2	..	..	..	..2	..1	..	..	..	..	..	..	..	..2
Kingaroy	23.09	7	5	1	3	..	16	7	2	..	..	..	10	62.5	..3	..6	..4	..3	..4	..	8	..4	1	..1	..	..2	..1	..3	..	..	..	..9
Longreach	116.16	52	31	13	11	..	107	9	9	1	..1	..	20	18.69	..	3	1	3	..	9	9	..	6	..	..	..	..	..	..	..	..	..10
Mackay	52.87	11	3	11	7	..	32	4	..9	..1	..1	..	6	18.75	..2	..3	..8	..4	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mareeba	143.3	32	22	13	12	..	79	8	..	..3	..3	..	23	29.1	..6	..5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..6
Maryborough	22.48	7	3	3	1	..	14	..	..	..	..	..	..2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..2
Miles	19.97	4	2	..	..	..	6	..	..1	..	..1	..	..	33.3	..	..	..	..1	..1	..	..	..	..	..	..	..	..	..2	..	..	..	..
Mitchell	21.76	3	3	4	2	..	12	1	..	..2	..1	..	2	16.6	..2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..3
Monto	20.85	4	4	1	1	..	10	3	..	..	..	..	5	50.0	..	..	..	..	..	..	..	..	..	..	..	..	..	..2	..	..	..	..2
Mossman	46.24	11	5	2	2	..	20																									

DIVISION OF SOCIAL WORK

Senior Social Worker: M. K. WHILEY, B.A., Dip. Soc. Stud. (Melb.)

The Social Work departments which were established recently within the hospital and health services have continued to offer a very real service and to make their contribution to the health and social well-being of patients and families in this community. As yet these departments are small and the demands on the staff are heavy and steadily increasing with the wider recognition of the work, but efforts are being made in these early stages to meet some of the most urgent needs and at the same time to establish sound policy upon which effective full services can be built later.

In the hospitals in Brisbane, Toowoomba, and Townsville, small nucleus staffs of social workers, working closely with the medical officers, are contributing to treatment by offering emotional support and assistance to patients and their relatives in those social problems which are linked in some way with the patient's illness. Many disabled and elderly patients have been helped to arrange suitable after-care, while others have received assistance with constructive plans for their rehabilitation.

In the Welfare and Guidance Clinics where social workers have been appointed to work as members of the psychiatric team, they are contributing, by their interviews with worried parents, to the skilled diagnosis and treatment of family problems, and are helping through relief of social stresses within the family, to prevent delinquency and further social breakdown.

As it has not yet been possible to offer a full casework service to meet many of the pressing needs for social work in this State, with the limited number of qualified social workers available in the hospitals and the health services, a consultant social work service has been offered through the Division of Social Work. This service has been used particularly by the Director-General, the School Health Services, Mental Hygiene, State Children Department, Maternal and Child Welfare and the Division of Tuberculosis, and by a number of voluntary agencies.

In addition, in a limited number of cases, a direct casework service was offered by the social workers in this Division. From the requests which were referred to this Division, the Senior Social Worker has tried to select, for a direct casework service, only those cases where there was a clear need for social work and where no other service was available to meet this need.

ANALYSIS OF CASEWORK

The following analysis of this group of 132 cases will be of interest. Like many of the requests which have come to the social workers in the hospitals and the guidance clinics, the cases reveal an urgent need for preventive social work in the fields of family and child welfare and for the extension of medical and psychiatric social work services.

TABLE CXIX

SHOWING SOURCE OF REFERRAL

A. Interdepartmental. (Including School Health Services, Maternal and Child Welfare, Psychiatric Clinic)	66
B. Other Government Departments	6
C. Client or associate direct to social worker	30
D. Other Social Agencies	10
E. Others (including Social Workers in Hospitals, and General Practitioners) ..	8
F. Carried forward from previous year ..	12

*CLASSIFICATIONS OF PROBLEMS

Age (Care of Aged)	22
Alcoholism	7
Accommodation	5
Delinquency	2
Employment	8
Family and Child Welfare	30
Financial circumstances	19
Housing	5
Marital Conflict	10
Mental Defect	4
Mental Illness	17
Migration	3
Personality or emotional instability ..	12
Physical Illness or Disability	36
Rehabilitation	4
Unmarried motherhood	3

* It is noted that in some cases more than one basic problem was evident

SERVICE GIVEN

1. Social Investigations relating to:—	
(a) Mental illness or defect	22
(b) Physical illness or disability	29
(c) Care of the Aged	18
(d) Family and child welfare	31
(e) Other (including housing, employment, probation)	7
2. Social reports—	
(a) To Department (including other State Government Departments and Hospitals)	68
(b) To other Social Agencies	13
3. Help with problems of Social Adjustment (including family, marital and child welfare)	37
4. Casework relating to physical or mental illness or disability (including rehabilitation)	36
5. Referral to other Division or Agency for Service—	
(a) Child welfare	14
(b) Care of Aged	5
(c) Financial or material aid	15
(d) Medical or psychiatric treatment or assessment	25
(e) Other social casework service	15
(f) Other (including facilities for mentally subnormal, employment, accommodation, adoption and legal aid)	17
6. Other service given—	
Consultation	15
Information re Community Resources ..	10
Liaison between Statutory and Voluntary Services	4
Co-ordinating service between other social workers and Department ..	5

CONSULTATIONS

In addition to the above cases where a direct casework service was given to clients, there was a large number of requests where a consultant service only was offered, or where it was found, after telephone discussions only, that the request could be appropriately referred to another agency for investigation and help.

Discussions took place with officers of other Departments on the social aspect of patient's medical or psychiatric problems and possible community resources for helping them. This consultation service has been very worthwhile and it is planned that this should continue as one of the functions of the Division, particularly while there is a shortage of social workers.

OTHER ACTIVITIES

Along with the casework services to help individual clients and their families, the Division has undertaken several studies in the broader field of social welfare. These have included an assessment of the resources for helping unmarried mothers and a study of services available for the care of aged and chronically ill patients who are unable to manage in their own homes.

FLYING SURGEON SERVICE

Flying Surgeon: C. F. A. CUMMINS, F.R.C.S. (Edin.)

Anaesthetist: W. W. BIGGS, M.B., B.S. (Qld.)

The Service is now well into its third year and since the last Report its scope has been considerably enhanced by the provision of a twin-engined Cessna 310 aircraft.

This aircraft has a top speed of 210 m.p.h. and a much longer range than the Cessna 182 which was used previously and it has allowed an extension of the service to the Roma Hospitals Board's area which includes Roma, Injune, and Surat. It has also allowed the team to return to base at night with much greater facility and frequency than previously.

A portable diathermy machine has been acquired during the year and this has considerably increased the scope of operations in the smaller hospitals where this apparatus was not previously available. It has enabled prostatectomies and other such operations to be done and has also increased the efficiency and decreased the time spent on a large number of other operative procedures.

The C.I.G. Midget Portable Anaesthetic machine has proved quite satisfactory for giving combined anaesthetics involving relaxation of the patient. Trilene is not used to the same extent as in larger hospitals because of the large flow of nitrous oxide and oxygen required and the limited stocks of these on hand at most of the hospitals visited. For major paediatric operations using this machine, ether (with an endotracheal tube) is used predominantly, though with the new diathermy unit this may have to be changed.

In July, 1960, the Flying Surgeon read a paper on the Flying Surgeon Service at the North Queensland Medical Conference at Rockhampton.

There has been slow but steady improvement in the surgical facilities at the twenty-four hospitals visited by the Flying Surgeon.

Overheating of patients in the operating theatres is still a big problem in some of the small hospitals during the summer months but about half of the hospitals have now installed air conditioning units in the theatres and the remainder will have these installed in due course.

The older type theatre lamps which some of the hospitals still possess are being replaced by modern fully adjustable shadowless ones and in addition some of the hospitals have been making structural alterations to their buildings which have all led to an increased efficiency.

During the year 1st June, 1960, to 31st May, 1961, a total of 1,136 cases were seen in consultation. The various specialities were split up approximately as follows:—

General Surgery (including plastic, thoracic, E.N.T., and neuro-surgery)		576—52	per cent.
Orthopaedic Surgery		323—30	per cent.
Gynaecology		108—8	per cent.
Genito-Urinary		78—6	per cent.
Obstetrics		21—1½	per cent.
Endoscopy (including oesophago-scopy and bronchoscopy for foreign bodies, &c.)		20—1½	per cent.
Burns		10—1	per cent.

Total operations performed during the year were 413 of which 71 were emergency ones.

19 cases were transferred to larger centres—these patients were essentially sent to specialised units such as neurosurgical, thoracic, and radiotherapy.

LEGISLATION

"*The Health Acts, 1937 to 1960*," were amended to declare melioidosis a notifiable disease and lead poisoning a disease to be notified to the Local Authority as well as the Director-General, whilst a new standard for brandy was prescribed to bring it into conformity with other States.

Amendments to "The Food and Drug Regulations of 1957" were published in the *Government Gazette* of 13th August, 1960. Those of chief importance were the provision of new standards for various foods as recommended by the National Health and Medical Research Council and a new Regulation concerning the cleansing of glasses and drinking vessels at hotels.

Regulation 9 of "The Venereal Diseases Regulations of 1945" which provided for the compulsory examination of prostitutes was repealed as this Regulation prevents Australia's becoming a party to the United Nations Convention on the Suppression of Traffic in Persons and Exploitation of the Prostitution of Others.

The Radioactive Substances Regulations made under "*The Radioactive Substances Act of 1958*," were published in the *Government Gazette* of 23rd. March, 1961. These Regulations come into force as from 1st January, 1962.

ACKNOWLEDGMENTS

I am deeply grateful to all members of the staff for their co-operation, loyalty, and conscientious attention to duty.

Acknowledgment is also made to the Agent-General for Queensland and his officers for the assistance given me whenever it was asked for, and to other Government Departments for their co-operation, particularly the Government Statistician, who, as usual, has been of great assistance in preparing the vital statistics section of this report and supplied other statistical details from time to time throughout the year.

Members of the British Medical Association have again been most co-operative, and it is desired to express appreciation for this.

I would also thank the members of the Advisory Committee on Hospital Drugs and Surgical Appliances for their co-operation, and I particularly thank Dr. A. D. D. Pye, General Superintendent of the Brisbane Hospital, and Dr. O. W. Powell, Medical Superintendent of the Princess Alexandra Hospital, for the assistance they have given during the year.